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Southwestern MEDICINE

VOL. XXXVII OCTOBER, 1956 No. 10

EDITORIAL

Social Security Extension

By Robert B. Homan, Jr., M. D., El Paso

Mr. David Lawrence, Editor of *U. S. News and World Report,* has called the late 84th Congress "the most extravagant in giving away the taxpayers money." In appropriating over sixty billion dollars Congress covered, among other things, armament in peacetime (defense), foreign aid, farm aid through a "soil-bank" and "parity", and greatly extended the social welfare program — authorizing the largest amounts of "welfare" money ever voted! Social security "coverage" now exceeds the wildest expectation of the "planners" who originated the U. S. program in 1935.

The law has now been extended to cover another large group of self-employed people — 600,000 additional farm owners and operators, and 225,000 profesionals, such as dentists, lawyers, chiropractors, naturopaths, veterinarians, optometrists, and osteopaths. This action leaves only the Doctors of Medicine and the Christian Science Readers out of the social security tax system! It has been reported that some congressmen have been laying friendly wagers that the M. D.'s will beg for admission within the next year or two! This may be true, although in the 1956 poll of our profession, conducted by the various State Medical Associations, only one state (Massachusetts) voted for compulsory social security "coverage" for Doctors of Medicine.

Widespread Opposition

Despite opposition by insurance companies and actuaries, by many business men, by the medical profession, by rehabilitation experts, and by the Eisenhower administration, the Congress adopted the controversial disability portion of the latest welfare bill. This proposition, which is now the law and is effective as of July 1, 1957, provides for pension payments for total and permanent disability at the worker's age of 50 and beyond. Editorially, Barrons National Business and Financial Weekly states the "case" in this connection most appropriately.

"Of still greater import — is the new provision for disability pensions — a proposal rejected by Congress on at least four prior occasions. Obviously, this opens up a vast and complex field. While only limited costs will be felt for next year, the ultimate outlay is incalculable. For the criteria of disability, however carefully spelled out, necessarily remain fuzzy, compared to such demonstrable facts as age and survivorship. Psychological and economic factors can make one man's partial handicap another's total disability, as private insurors have found out. Administering the law fairly thus will require Solomon's wisdom, and frequent recourse to the courts. Above all, though, looms the danger that cash payments for disability may snowball indefinitely, perhaps at the expense of rehabilitation. For this year's provisions are but the entering wedge. A program that covers only the totally and permanently disabled today can reach out to the partially or temporarily incapacitated tomorrow, as well as to those under 50. Thus the door may be opened to across-the-board Government competition with private health and accident companies.

Still Strong

The push for the Welfare State, then, is still strong in Washington. Americans, a generous and humanitarian people, don't want their aged and disabled to starve. The question, though, is not *whether* to care for such people, but *how*. Ever-mounting federal benefits inevitably spell ever-mounting costs. Already the payroll levy extracts more from some employees with several dependents than does the income tax. And Uncle Sam is under obligation to the young worker and his family no less than to the aged and dependent. It's time to recognize that Santa Claus really is only the taxpayer in disguise and that even his burdens should know some limit."

With this extension of social security benefits, naturally there comes an increase in "social security payments" — also known as taxation — by both the employee and the employer — 2¼ per cent for each on the first $4200.00 of the employees income. For

(Continued on page 588)

CURRENT THERAPY

Oral Hypoglycemic Agents

By Jack A. Bernard, M. D., El Paso

As evaluation of the orally-active hypoglycemic agents proceeds, physicians and patients alike are anxiously awaiting reports of the "oral insulins". Actually these drugs should not be considered as oral insulins as they have no action in the totally depancreatized or in the alloxan diabetic animal and their effect is obtained only when a certain amount of insulin is present, either produced endogenously or supplied by injection.

The compounds under study include Carbutamide (aminophenurobutan — Lilly) and Orinase (tolbutamide — Upjohn). Both are sulfonamid derivatives. Orinase differs from Carbutamide in having a methyl group substituted for the amino group on the benzene ring. Pharmacological difference is the absence in Orinase of a bactericidal action present in Carbutamide.

It is important that we keep abreast of the developments of these and other similar compounds, as they may soon be commercially available, or at least they will be harbingers of more effective oral antidiabetic agents. The present ones are in no way a direct substitute for insulin, and they have been of no value in the juvenile diabetic. The persons most likely to benefit are the adult obese type of diabetic, with a fairly stable diabetes of short duration. Also, they have no value in the treatment of diabetic emergencies and acidosis, as time is needed for their full therapeutic action to develop. Actually, certain cases have shown a hypoglycemic effect after the cessation of therapy.

Therapeutic Results

Carbutamide gives positive therapeutic results in from 50 to 90 per cent of the cases, according to European studies. Dosages of the drug vary according to the patient and the response, but usually between one to three grams initially, and about one gram daily thereafter. After a dose of three grams of Orinase the blood sugar usually falls 20 to 30 per cent in a period of one to four hours and gradually returns to normal after a period of six to twelve hours. The drugs may be given as a single dose rather than in divided dosage.

The mechanism and site of action of Orinase and Carbutamide has not been fully established. It is thought that a major portion of activity may be due to a reduction of the rate of destruction of insulin in the organism.

As sulfonamide derivatives, one would expect the drugs to have antibacterial and goitrogenic effects. Orinase, as mentioned, has no antibacterial effect, and no goitrogenic effect. Also, both drugs are excreted in the urine as highly soluble derivatives and crystalluria has not been observed.

Studies in animals so far have indicated that Orinase is a relatively nontoxic substance, but further studies and investigations are being carried out. Side effects with Carbutamide are being reported and the instance is about five per cent. These side effects include various types of hypersensitivity reactions such as leukopenia, anemia, and skin rashes. More serious hematological reactions may be implicated although this is not yet established.

Indications For Use

As regards indication for the drugs, the prime indication is the adult obese type of diabetic. Approximately a third or more of the diabetics whose disease develops between the age of twenty and forty years have demonstrated a satisfactory response to the drugs, while it seems that those who develop diabetes after the age of 40 do not seem to respond so well. The drugs are of little value in the juvenile type of diabetes.

Because of their limited use and possible toxic effects, these drugs are not yet clinically available for general use and will not be made available until further careful extensive investigation has established their usefulness as harmless oral hypoglycemic agents.

Social Security Extension . . . . .

(Continued from page 587)

the self-employed the percentage is now 3⅛ per cent of the first $4200.00. Now, of course, both the percentage of taxation and the taxable income level can be changed — upward — by any future Congress. How long is it going to take the American people to realize that there is no such thing as federal aid or federal pensions without increased federal taxation? The Government has nothing with which to give "aid" or "pensions" except that which it takes away from all Americans through taxation.

History tells us that nations which have adopted social welfare programs have found state ownership and state medicine a convenient sequence. Both of our political parties have promised further extension of social security. It could still happen here!

Edited by Andrew M. Babey, M. D., Las Cruces, N. M.

APHORISMS and MEMORABILIA

Miscellaneous Truths and Concepts

(Continued)

14. "Almost every day the daily newspaper relates the story of an injured child who is rushed to the receiving hospital with screaming sirens — only to be sent home by the intern or orderly in attendance when it regains consciousness or stops crying. A day or two later, when the child is found unconscious, instead of consulting a specialist, the family doctor rushes the child to the hospital, and, like the traditional painting of the physician, sits by the bedside and comforts the parents until the child, with the surgically curable hematoma, finally dies." Emil Seletz; "Recent Trends in Management of Craniocerebral Injuries"; *Journal of American Med. Assn;* June 18, 1955; P. 537.

15. "It is exceedingly rare that any patient with respiratory paralysis needs to be kept indefinitely in a tank respirator. With skillful energetic treatment and support from rehabilitation techniques, almost any patient can be freed from dependence upon the tank respirator within a few months." James L. Wilson, David G. Dickinson; "Prevention of Long-Time Dependence of Poliomyelitis Patients on Tank Respirator"; *loc. cit.,* P. 555.

16. "The physical examination of a patient ill for a long time must never become cursory, and each examination should be as thorough as if it were the first. Always remember that if you miss anything it is not because your intellect is failing, but because you are not on the look-out for it." A. B. Carter; *The Lancet;* April 30, 1955; P. 909.

Cardiacs in Chair

17. "Within the past several months it has been shown by direct catheterization studies that the work of both the normal and the diseased heart is 23 per cent greater in bed than with the patient in a chair with the feet down. It is evident from this that most cardiacs, including those with acute coronary thrombosis, are treated more effectively if kept in a comfortable chair with the feet down than if kept in bed all day." Samuel A. Levine; *Annals of Internal Medicine;* June 1955; P. 1278.

18. "Rarely, the neurological changes in the cirrhotic patient are chronic, and episodes of tremor, confusion, stupor, and coma may occur for years before the correct diagnosis is made. This concept of 'chronic intermittent hepatic coma' has been recognized only recently. In the intervals between the episodes the patient is almost normal." Sheila Sherlock; *British Medical Journal;* June 4, 1955; P. 1383.

19. "Hemoglobin in the urine may appear pink to red as oxyhemoglobin, brown as methamoglobin and black as reduced hemoglobin in large amount. Thomas Hale Ham; *American Journal of Medicine;* June 1955; P. 993.

20. "The finding of hemosiderinuria without hemoglobinuria is consistent with but not diagnostic of intravascular hemolysis and hemoglobinemia of moderate degree. Hemosiderinuria may occur in hemochromatosis. Hemoglobinuria accompanied by hemosiderinuria is diagnostic of hemoglobinemia of more marked degree. Direct observation of hemoglobin and methemalumin in the plasma is pathognomonic of intravascular hemolysis." T. H. Ham; *loc. cit.,* P. 994.

Red Cells Hemolyzed

21. "Red cells will be hemolyzed promptly in vivo by osmotic rupture in urine having a specific gravity of 1.007 or less. In this case hemolysis may be so complete that red cells cannot be detected in the voided sample and the degree of hemoglobinuria may be extreme, suggesting severe intravascular hemolysis. However, if hemolysis occurs in the urinary tract no hemoglobin or abnormal pigments appear in the blood plasma and no hemosiderin occurs in the urine." T. H. Ham; *loc. cit.,* P. 994.

22. "Red cells from any source will hemolyze in urine that remains at room temperature." T. H. Ham; *loc. cit.,* P. 994.

23. "The only valid answers to the problem of the difficult patient are to be found through an inquiry into the negative aspects of the physician-patient relationship. Unconsciously, at least, physicians who complain of difficult patients are guiltier of complicity than is immediately evident. The physician is in the center of a maelstrom of emotions in every clinical situation. He sets both the psychologic stage and the permissible limits for the patient's response. Consciously and unconsciously, he allows his relationship with the patient to promote or repress certain latent dispositions." Howard P. Rome; *American Practitioner;* June, 1955; P. 900.

Various Physicians

24. "The physician who is intolerant of, or personally disturbed by, emotional interplay inadvertently imposes a great burden on his patients. He is tactless under the guise of being honest and direct. He sees little need for the preparation of patients for disturbing news. He gives prognostications and diagnoses to all patients indiscriminately, forgetting that one man's meat is another's poison. He inveighs against what he calls "the patient's weakness" by

recounting in detail the much worse plights of other patients." Howard Rome; *loc. cit.,* P. 900.

25. "The opposite sort is typified by the physician who infantilizes his patient. By suggestion and prescription, he fosters their dependence. Bed rest, vacations and repeated admonitions to "Take it easy" are ordered p. r. n." Howard Rome; *loc. cit.,* P. 900.

26. "The physician who cannot be wrong is another kind of practitioner who imposes serious strictures on his patient's welfare. The patient's requests for information are treated as if they were impertinences. If the patient fails to respond to a therapeutic program as expected, he is told that the fault must lie within himself. He must have failed to obey instructions." Howard Rome; *loc. cit.,* P. 900.

"Pointers"

*From the Case Records of Massachusetts General Hospital 1951**

(Continued)

13. "It is often difficult to be sure about the presence of a duodenal or gastric ulcer by examining the outside of the stomach at operation; that is why when a patient is operated on for bleeding and the external appearance of the gastroduodenal segment is negative, surgeons look inside to be sure there is no bleeding point." *loc. cit.;* p. 570

14. "In gastrointestinal clinics, in about 10 or 15 per cent of patients who bleed from the upper gastrointestinal tract the source of the bleeding is never found." *loc. cit.;* p. 570

15. "There is no histologic distinction between the so called epidemic type of hepatitis and that of homologous serum jaundice. The histologic picture is identical in both conditions. Moreover, until we have an experimental animal to which the disease can be transmitted, with protection tests being made, it will be impossible, except on epidemiologic grounds, to distinguish between these two very similar diseases, if they are two diseases." *loc. cit.;* p. 571

16. "A poorly treated diabetic can develop diabetic neuritis very early in the course of the disease." *loc. cit.;* p. 684

10 Per Cent of Pregnancies

17. "About 10 per cent of pregnancies turn out to be abortions; the x-ray findings do not necessarily rule it out, because, although it is quite easy to ask the patient on the table to take a deep breath and hold it, it is very difficult to be sure that the fetus is co-operating. One plain film is not sufficient to eliminate fetal bones. We had a forty-five year old woman at the Peter Bent Brigham hospital with a mass of this size on whom the plain film was negative and the rapid pregnancy test was positive. Another film taken three days later was positive. Apparently at the time the first film was taken, the fetus squirmed and kicked, and its skeleton was blurred." *loc. cit.;* p. 730

18. "In the radiology department of this hospital it has been emphasized time and again that in order to discover a bleeding duodenal ulcer one must make the examination in the acute phase of the ulceration. The maneuver here has been to wait until the patient's condition has become stabilized and then go ahead with the x-ray examination. I think that, countrywide, 25 per cent of the so-called bleeding ulcers have been missed by delayed gastrointestinal series." *loc. cit.;* P. 768

19. "In approximately 50 per cent of cases of subdural hematoma no history of injury is obtained." *loc. cit.;* p. 852

Twilight Zone

20. "The average case of rheumatoid arthritis on the one hand and the usual case of lupus erythemoatosus on the other can be differentiated quite readily, but there is a twilight zone where cases of the two diseases become more and more similar." *loc. cit.;* p. 150

21. "In theory a dissecting aneurysm could start almost anywhere in the aorta; in fact that does not seem to be true. Almost invariably the intimal tear is found in the ascending aorta within a few centimeters of the aortic valve." *loc. cit.;* p. 187

22. "Clubbing is rare but possible with cirrhosis of the liver or with liver disease of any cause. It is also possible but unusual in pulmonary emphysema in the absence of bronchiectasis, bronchitis or other pulmonary disease." *loc. cit.;* p. 225

23. "Liver abnormalities are quite common in association with ulcerative colitis. However, they have proved very variable in type." *loc. cit.;* p. 267

24. "It was rather impressive, in reviewing a series of cases of fatal hepatitis in Army hospitals, to find that at least three patients had entered the hospital on the Neurosurgical Service and had at least a lumbar puncture—and in one instance a cranial exploration for a subdural hematoma." *loc. cit.;* p. 467

*We are grateful to Dr. Benjamin Castleman, Editor of "Case Records" and Dr. Joseph Garland, Editor of "The New England Journal of Medicine" for permission to publish these excerpts. They will appear regularly and cover the years 1951 through 1955.

Aphorisms Concerning Chest Diseases
Bronchogenic Carcinoma

By E. S. Crossett, M. D., El Paso

1. The symptoms of bronchogenic carcinoma are in large measure, commensurate with the location of the tumor, its size, and the degree of bronchial obstruction and the degree of secondary infection beyond the site of obstruction.

2. Cough is usually the earliest and commonest symptom of carcinoma of the lung. The onset of cough or change in the character of cough in middle aged persons always should cause concern.

3. Ulceration invariably occurs with enlarging carcinomatous process and may cause bleeding. Hemoptysis should suggest the possibility of carcinoma of the lung as it occurs in about 50 per cent of the patients with pulmonary malignancy.

4. Generally, hemoptysis from pulmonary carcinoma is not profuse, but produces only streaking of the sputum and therefore, may be misleading.

5. Weight loss is a common symptom of this disease and often goes hand in hand with weakness.

Pneumonia and Flu

6. So called "pneumonia" that does not clear up promptly should be looked upon with suspicion. "Flu", from which recovery is slow in a patient past middle age, should suggest the possibility of a carcinoma.

7. The most valuable aid in the diagnosis of lung carcinoma is the cytologic study of sputum and bronchial secretions. If five separate samples are examined, a positive microscopic finding will be present in 80 per cent of patients having a bronchogenic carcinoma.

8. A bronchogenic carcinoma of the lung can be visualized through the bronchoscope and a biopsy taken in approximately 40 per cent of cases.

9. The removal and microscopic examination of the lymph nodes from the supraclavicular area (Scalene node biopsy) often may establish the diagnosis of carcinoma of the lung in patients who have indefinite pulmonary lesions, when other diagnostic measures have failed.

Wide Margin

10. Malignant neoplasms should be removed by as wide a margin as is feasible. Total pneumonectomy with an enbloc removal of the hilar and mediastinal lymph nodes is the best way of effecting this in most instances.

11. On patients with pulmonary and cardiac disability, it is reasonable to perform lobectomy rather than pneumonectomy, provided that the location of the lesion will permit it and the hilar lymph nodes are not involved with carcinoma as determined by examination of frozen sections.

12. Only in cases of small cell carcinoma of the lung are the results of resective treatment uniformly bad. Shaw and Paulson report a 13 per cent a year cure in patients in which pneumonectomy is necessary and a 25 per cent four year cure where lobectomy is performed.

Abstract

Feinblatt, T. M., Feinblatt, H. M. & Ferguson, E. A.: Arteriosclerotic Syndromes, niacinamide hydroiodide (parenteral) treatment, *Med. Times* 84:741 (July) 1956.

In a series of 50 cases of arteriosclerosis, the signs and symptoms which are partly reversible showed significant improvement after treatment for two months with parenteral niacinamide hydroiodide in combination with iodides. There was some alleviation of the condition in every case.

The average age of the patients was 61, weight 157 lb. Significant relief of the following symptoms was observed: vertigo, depression, disorientation, excessive fatigue, vague abdominal distress, headache, emotional instability and anorexia. The medication used was Iodo-Niacin ampuls 5 cc. twice weekly by intramuscular or slow intravenous injection.

No untoward effects were observed and there was not a single case of iodism. Iodo-Niacin ampuls contain a combination of niacinamide hydroiodide with sodium iodide and niacinamide. The rationale of its use depends on the close relationship between iodism and pellagra, both of which are associated with porphyrinuria and impairment of the co-enzyme mechanism.

The action of niacinamide hydroiodide in prevention of iodism is the same as that of niacinamide for pellagra. Reference is made to the report of an ophthalmologist who noted significant improvement of the retinal vessels following use of Iodo-Niacin.

MEETINGS

Southwestern Medical Association to meet Oct. 17-19 in Albuquerque

The Southwestern Medical Association, which has held its annual meeting in Phoenix, El Paso and Tucson, respectively, for the last three years, will have its 38th annual meeting in Albuquerque, from October 17 through October 19.

The meeting will be preceded on October 16 by a regional meeting of the American College of Physicians in New Mexico. The Veterans Administration Hospital in Albuquerque has been selected as the site for this one-day session. Dr. Robert Friedenberg of Albuquerque is Governor of the College for New Mexico.

The annual meeting of the Southwestern Dermatological Society will be held in Albuquerque, Saturday, October 20, in connection with the Southwestern Medical Association meeting. Dr. Samuel J. Jelso, Albuquerque, president of the society, has announced that there will be a presentation of dermatological cases in the morning, followed by lunch, after which there will be a discussion. The meeting is scheduled to be held in the new Bernalillo County Indian Hospital.

Pediatricians to Meet

Pediatricians are having a dinner meeting on Thursday night, October 18. Pediatricians, their wives and friends are invited. The meeting will be in the Alvarado Hotel at 7:30 p. m. Dr. M. K. Wylder of Albuquerque is in charge.

Headquarters for the Southwestern meeting will be in the Hilton Hotel. Dr. J. H. Dettweiler, president of the Association, is in charge of the over-all arrangements. Dr. Dettweiler has announced that members of the Association attending the Southwestern meeting will be entitled to 15 hours credit in Category One training for the American Academy of General Practice.

Speakers Listed

Speakers coming to Albuquerque for the meeting are as follows:

Colin G. Thomas, Jr., M. D., Associate Professor of Surgery at the University of North Carolina School of Medicine.

John A. Bigler, M. D., Professor of Pediatrics and Head of the Department of Pediatrics, Northwestern University School of Medicine.

Stephen Rothman, M. D., Professor of Dermatology and Head of the Department of Dermatology at the University of Chicago School of Medicine.

Galen M. Tice, M. D., Professor of Radiology and Head of the Department of Radiology at University of Kansas School of Medicine.

Robert H. Barter, M. D., Associate Professor of Obstetrics and Gynecology at the George Washington University School of Medicine.

W. B. Bean, M. D., Professor of Medicine and Head of the Department of Medicine at the University of Iowa School of Medicine.

On the social agenda, a stag smoker is scheduled for the night of October 17 and a dinner dance on the night of October 19, with dress informal, both events to be held in the Hilton Hotel.

The Women's Committee has arranged a party Wednesday for wives of physicians in the Albuquerque Country Club, a lunch on Thursday and brunch for Friday. Details on these events will be announced at the meeting.

Second in New Mexico

The American College of Physicians meeting is the second one of its kind to be held in New Mexico. Registration on the scientific session will be conducted at the Recreation Hall of the Veterans Administration Hospital at Albuquerque, New Mexico through the kind offices of Dr. Lester Kanter, Chief Medical Officer of that institution.

Following morning registration, medical rounds will be arranged at Sandia Base Hospital, Veterans Administration Hospital and the Bernalillo County Indian Hospital. The latter institution represents an unique experiment in the care of Indian patients by private physicians. Col. L. B. Hanson, C. O. of Sandia Base Hospital has kindly arranged for rounds at that institution which is an integral part of the nation's activities in atomic energy research and application.

Following hospital rounds in the morning, the meeting will reconvene at 1:00 p. m. in the Veterans Administration Hospital and the scientific program will follow. The papers will approximate 15 minutes in length, except for that of Dr. William B. Bean, Professor and Head of the Department of Internal Medicine at the University of Iowa.

Dinner at Country Club

Following the afternoon session a dinner is planned for the Albuquerque Country Club with Dr. Bean as guest speaker. Payment for dinner will be made at the time of registration. All members of the College and their guests, as well as those who are interested in Internal Medicine, are cordially invited.

Members of the committees in charge of the Southwestern Medical Association Meeting are as follows:

Program Committee:

W. E. Nissen M. D.
Lyle Carr, M. D.
J. H. Burress, M. D.
W. O. Connor, Jr., M. D.

Technical Exhibits:

A. R. Clauser, M. D.

Arrangements Committee:

Roy Robertson, M. D. - Equipment
Bert Kempers, M. D. - Golf
B. F. Roberts, M. D. - Registration
A. R. Clauser, M. D. - Finance
W. O. Connor, Jr., M.D. - Entertainment
A. R. Follingstad, M. D. - Reservations
A. G. Simms, II, M. D., - Luncheon

Ladies Committee:

Mrs. C. M. Thompson, Chairman
Mrs. W. W. Kridelbaugh, Vice Chairman

Scientific Program

Wednesday, October 17, 1956

8:30 a. m.
Registration

10:00 a. m.
Opening of meeting and address of welcome by Governor John Simms.

Morning Session

Dr. Stuart Adler, President of New Mexico Medical Society, presiding.

10:30 a. m.
The Clinical Significance of Common Vascular Lesions of the Skin.
Dr. W. B. Bean

11:15 a. m.
The Nature and Management of Atrophic Dermatitis.
Dr. Stephen Rothman

12:15 p. m.
Luncheon
Medical
Surgical

Afternoon Session

Dr. Robert Friedenberg, President of the Bernalillo County Medical Society, presiding.

2:15 p. m.
Biologic Considerations in the Management of Thyroid Cancer.
Dr. Colin Gordon Thomas, Jr.

3:05 p. m.
Pathology Seen by the Radiologist in the Upper G. I. Tract
Dr. Galen M. Tice

3:55 p. m.
Jaundice in Infancy
Dr. John A. Bigler

Dr. Barter

Dr. Bean

Dr. Bigler

Thursday, October 18, 1956

9:00 a. m.
Business Meeting.

Morning Session

Dr. Celso Stapp, President Elect, presiding.

9:45 a. m.
X-ray Diagnosis in Obstetrics and Gynecology
Dr. Robert H. Barter

10:45 a. m.
Precordial Noises Heard at a Distance From the Chest
Dr. W. B. Bean

12:00 Noon
Luncheon
Medical
Surgical

Afternoon Session

Dr. W. W. Lander, Roswell, presiding.

2:15 p. m.
Doctor's Responsibility in Mental Retardation
Dr. John A. Bigler

3:05 p. m.
Some Interesting Problems in the Treatment of Cancer by Radiation
Dr. Galen M. Tice

3:55 p. m.
Urticarial Diseases
Dr. Stephen Rothman

Friday, October 19, 1956

9:00 a. m.
Business Meeting

Morning Session

Dr. Russell Deter, El Paso, presiding.

9:45 a. m.
Management of Pelvic Relaxation
Dr. Robert H. Barter

10:45 a. m.
Mechanisms of Metastases and Their Clinical Significance
Dr. Colin Gordon Thomas, Jr.

12:00 Noon
Luncheon
Medical
Surgical

Afternoon Session

Dr. J. H. Dettweiler, Albuquerque. presiding.

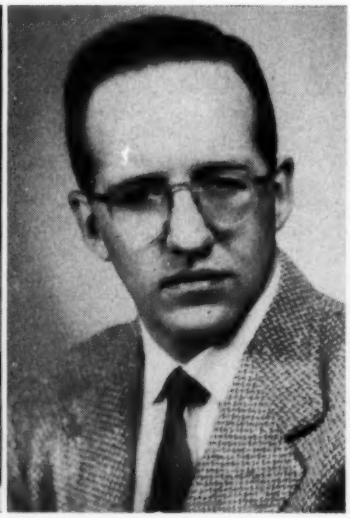
2:15 p. m.
Experiments in the Induction of Vitamin Deficiency
Dr. W. B. Bean

3:05 p. m.
Surgical Complications of Pregnancy
Dr. Robert H. Barter

3:55 p. m.
Some Pathological Considerations in the Treatment of Gallbladder Disease
Dr. Colin Gordon Thomas, Jr.

Visit Technical Exhibits

Dr. Rothman



Dr. Thomas

Dr. Tice

Technical Exhibitors

New Mexico Pharmacal Co., Albuquerque, N.M.
E. R. Squibb & Sons, New York
SW Surgical Supply Co., Albuquerque, N. M.
Allied Medical Supply, Inc., Albuquerque, N. M.
Eaton Laboratories, Norwich, New York
Parke, Davis & Co., Detroit
General Electric Co., Dallas
Sharpe & Dohme, Philadelphia
Mead Johnson & Co., Evansville, Indiana
Eli Lilly & Co., Indianapolis
A. H. Robins Co., Inc., Richmond, Virginia
Desitin Chemical Co., Providence, Rhode Island
Pet Milk Co., St. Louis
FIF Management Corporations, Albuquerque, New Mexico
G. D. Searle & Co., Chicago
J. B. Roerig & Co., Chicago
Winthrop Laboratories, New York
Lederle Laboratories Division, Pearl River, N. Y.
Ciba Pharmaceutical Products, Inc., Summit, N. J.
U. S. Vitamin Corporation, New York
Lloyd Brothers, Inc., Cincinnati
N. M. Chemical-Surgical Co., Albuquerque, N.M.
National Cash Register Co., Dayton, Ohio
The Coca-Cola Co., Atlanta
Blue Cross, Albuquerque, New Mexico

Regional Meeting of the American College of Physicians in New Mexico Veterans Administration Hospital

Tuesday, October 16, 1956, Albuquerque, New Mexico

Presiding Officer Robert Friedenberg, M. D., F. A. C. P., Albuquerque
Governor for New Mexico

PROGRAM

A. M.

9:15 - 9:45
Registration.

10:00 - 12:00
Hospital Rounds:
Sandia Base Hospital
Veterans Administration Hospital
Bernalillo County Indian Hospital

P. M.

1:00 - 1:30
Registration.

1:30 - 1:45
Clinical Evaluation on the Practicality of Intermittent Dicumarol Therapy.
George Simson, M. D., (by invitation), Albuquerque, N. M.

1:45 - 2:00
Splenectomy in Hematologic Disorders.
Samuel L. Painter, M. D., (by invitation), and E. D. Anderson, M. D., (by invitation), Albuquerque, N. M.

2:00 - 2:15
Endocardial Fibroelastosis in the Adult.
Alan L. Frankel, M. D., (by invitation), and George C. Cheney, M. D., (by invitation), Albuquerque, N. M.

2:15 - 2:30
Lumbosacral Roentgenograms of Three Hundred Soldiers: A Comparative Study.
Murray M. Friedman, M. D., (Associate), Santa Fe, N. M., Frederick J. Fischer, M. D., (by invitation), Detroit, Mich., and Robert E. Van Demark, M. D., F. A. C. S., (by invitation), Sioux Falls, S. D.

2:30 - 2:45
Intermission.

2:45 - 3:00
Bronchogenic Carcinoma Treated with Cobalt 60: A Review of 48 Cases.
Donald B. Stewart, M. D., (by invitation), Albuquerque, N. M.

3:00 - 3:45
Useful Lessons from Rare Diseases.
William B. Bean, M. D., F. A. C. P., Professor of Medicine and Head of the Department of Internal Medicine, State University of Iowa College of Medicine, Iowa City, Iowa

3:45 - 4:00
Review of Serum Protein Determinations by Paper Chromatography.
Charles R. Beeson, M. D., (Associate), Albuquerque, N. M.

Evening

Albuquerque Country Club
(Ladies cordially invited)

6:30 - 7:30
Social Hour.

7:30
Dinner (Informal).
Toastmaster; T. L. Carr, M. D., F. A. C. P.
Address of the Day: "Careers in Medicine."
William B. Bean, M. D., F. A. C. P., Professor of Medicine and Head of the Department of Internal Medicine, State University of Iowa College of Medicine, Iowa City, Iowa.

Program Committee

T. L. Carr, M. D., F. A. C. P., *Chairman*
H. Richard Landmann, M. D., F. A. C. P.
J. R. Van Atta, M. D., F. A. C. P.
Robert Friedenberg, M. D., F. A. C. P., *ex officio*

Southwestern New Mexico Medical Society Meets in Deming, N. M.

Thirty seven physicians and their wives attended the regular meeting of the Southwestern New Mexico Medical Society September 12 at Deming, N. M. in the Rio Mimbres Country Club.

The principal speaker was Dr. Clement C. Boehler of El Paso, who presented an excellent series of slides illustrating his talk on the subject of "Techniques of Abdominal and Vaginal Hysterectomies".

Dr. Boehler was surprised to discover that one of the guests was Dr. John H. Mohardt, Chief of Surgery at the Fort Bayard Veterans Hospital, Fort Bayard, N. M., who was attending surgeon at Mercy Hospital in Chicago when Dr. Boehler interned there many years ago. Dr. Mohardt, while attending Northwestern University School of Medicine, enjoyed the distinction of playing with Red Grange on the Chicago Bears professional football team. A graduate of medical school in 1927, Dr. Mohardt played with the Bears from 1922 to 1926 and from 1919 to 1921 played halfback on Knute Rockne's Notre Dame team. He was an All Western selection and made Walter Camp's second All American team. Following medical school, he had a fellowship at Mayo Clinic from 1928 to 1933.

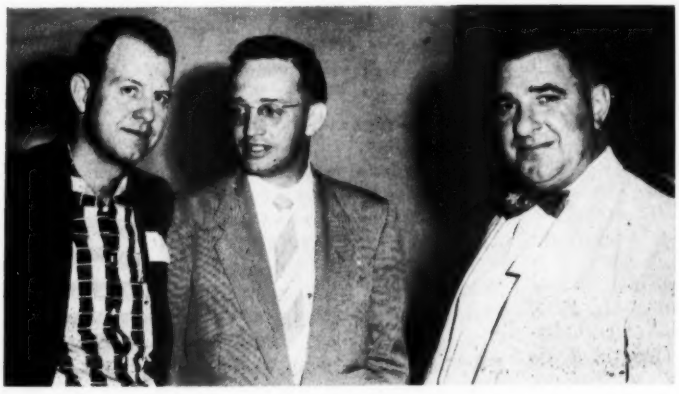
Next meeting of the Society will be on January 9, 1957, at Deming. The Las Cruces group will be host. There is some possibility that this meeting will be moved to Las Cruces and details will be announced later.

Dr. William J. Hossley, Jr., of Deming, President, announced that the tremendous expansion at Alamogordo, N. M., had resulted in the movement of sev-

Left to right are Dr. Clement C. Boehler of El Paso, Dr. Warren Hall of Silver City, Dr. Wendell S. Dove of the Veterans Hospital at Fort Bayard, Mrs. Dove and Mrs. Boehler.

Left to right are Dr. I. C. Eldridge of the Veterans Hospital at Fort Bayard and his wife and Dr. and Mrs. John H. Mohardt, also of Fort Bayard.

Left to right are Mrs. T. H. Klunder of Lordsburg, Dr. Ira O. Wilson of Fort Bayard, Mrs. Herman S. Cohen of Lordsburg and Dr. John E. Skaff of Fort Bayard standing in the rear.



Left to right are Dr. C. C. Cobb of Silver City, Dr. Richard A. Walsh of Silver City and Dr. Sidney F. Baker of Silver City.

eral new physicians to that community. The possibility of bringing Alamogordo into the Southwestern New Mexico Medical Society was discussed.

Another guest from the Veterans Hospital at Fort Bayard was Dr. Wendell S. Dove, who has just recently returned from Bogota, Colombia, after having spent a total of 28 years in Central and South America. Dr. T. H. Klunder of Lordsburg, Dr. Warren Hall of Silver City and Dr. Richard A. Walsh of Silver City, all new members of the Society, were introduced.

Other officers of the Society are Dr. C. C. Cobb of Silver City, Vice President; and Dr. Sidney F. Baker of Silver City, secretary-treasurer.

Western Railway Surgeons to meet in El Paso Oct. 24-26

Dr. Dwight H. Murray, president of the American Medical Association, will be the special guest speaker in El Paso October 25 at the annual meeting of the Western Association of Railway Surgeons.

Approximately 150 members of the Association are expected to attend the meeting, which will start October 24 and close October 26. Members of the Association are railway surgeons from the entire western half of the United States.

Dr. E. W. Rheinheimer of El Paso is president and general chairman of the meeting. Dr. Russell Holt, also of El Paso, is chairman of the committee on local arrangements. Headquarters will be in the Hotel Paso Del Norte.

Members of the El Paso County Medical Society will be invited to attend the banquet at which Dr. Murray will speak.

Industrial Medicine Is Subject of El Paso Postgraduate Session

A one-day course in industrial and general medicine will be held by the El Paso Division of the University of Texas Postgraduate School of Medicine Sunday, October 7, at 1301 Montana Street.

The session will start at 8:30 A. M.

Dr. Ralph H. Homan of El Paso is director of the El Paso Division of the Post-Graduate School.

Physicians from all areas of the El Paso Southwest including West Texas, New Mexico, Arizona and Mexico are invited to attend.

The American Academy of General Practice will grant credits to physicians taking the course.

The Program

The day long program with speakers and their subjects includes Dr. Leslie M. Smith, El Paso, "Dermatology of Industrial Origin;" Dr. Robert B. Homan, Jr., El Paso, "Diseases of the Chest of Industrial Origin;" Dr. Robert J. Potts, Dallas, "Preventive Medicine as Practiced by an Industrial Medical Department;" Dr. Maurice P. Spearman, El Paso, "Industrial Opthalmology;" Dr. J. W. Ranier, Odessa, Texas, "Health Maintenance in Industry;" J. A. Hancock, Ph. D., Texas Western College, El Paso, "Industrial Toxicology;" and Smith Pettigrew, Dallas insurance specialist, "Industrial Practice in Relation to the Medical Profession."

TAGP Elects Drs. Oswalt, Schmidt

Dr. C. E. Oswalt of Fort Stockton has been elected vice-president of the Texas Academy of General Practice. Dr. E. W. Schmidt of Pecos and Dr. Cecil French of San Angelo were elected district directors.

Elections were held at the Academy's convention in Houston during September. Dr. G. W. Launey of Dallas is the new president.

Program Announced for Southwest Ob-Gyn Meeting

Dr. Hollis H. Brainard, Tucson, President of the Southwest Obstetrical and Gynecological Society, has announced subjects of guest speakers for the Sixth Annual Meeting of the Society to be held November 12 and 13 in Tucson, Arizona. Speakers and subjects are as follows:

Bayard Carter, M. D., Professor of Obstetrics and Gynecology, Duke University, Durham, North Carolina, "The Vaginal Approach to Pelvic Pathology in Obstetrics and Gynecology", "Endometriosis", "Complications of Obstetric Hemorrhage".

Franklin L. Payne, M. D., Professor of Obstetrics and Gynecology, University of Pennsylvania, Philadelphia, Pennsylvania, "Intra-Cavitary Radium for Benign Uterine Bleeding; A Twenty-Year Follow-Up Study", "Non-Obstetrical Surgical Complication of Pregnancy", "Radiographic Studies of Urinary Stress Incontinence; The Therapeutic Application".

Ralph A. Reis, M. D., Professor of Obstetrics and Gynecology, Northwestern University, Chicago, Illinois, "Diabetes and Pregnancy", "Obstetric Analgesia and Anesthesia".

E. Stewart Taylor, M. D., Professor of Obstetrics and Gynecology, University of Colorado, Denver, Colorado, "Management of Sixty-one Consecutive Patients with a Final Diagnosis of Carcinoma-In-Situ of the Cervix. Review of Results and Discussion of the Election of Hysterctomy versus Conservative Management", "Placental Hormone Studies and Their Relationship to the Causes of Prematurity. Implications of These Findings in Regard to Prevention and Treatment of Premature Labor", "The Adrenal Gland in Gynecological Practice."

Headquarters for the meeting will be at the Arizona Inn. Reservations are to be made directly with the Arizona Inn including time of arrival and departure.

ANTIBIOTICS

Terramycin

Editorial: Wellman, W. E., Minnesota Med. 33:713, 1950

Terramycin is relatively nontoxic. Gastrointestinal irritation is occasionally observed, but such symptoms can be overcome by concurrent administration of milk. It has been demonstrated that milk does not interfere with absorption of terramycin.

Clinical Clippings, October, 1950.

PEDIATRICS

Natal And Neonatal Teeth

Massler, M., et al., J. Pediat. 36:349, 1950

Extraction of natal or neonatal teeth is not recommended unless their presence causes serious difficulty to the infant or mother. If extraction is attempted, consideration must be given to physiologic hypoprothrombinemia present during the first weeks of life.

Clinical Clippings, July, 1950.

ORIGINAL ARTICLES

The Treatment of Histaminic Cephalgia With Antihistaminic Drugs

By Branch Craige, M. D., El Paso

A proposed method of treatment, if it cannot claim infallibility, should have definite advantages over standard methods to compensate for not always being successful. Such is the case with the antihistamine treatment of histaminic headache. Standard treatment with "histamine desensitization", though usually effective within days or weeks, does not give immediate relief. It requires numerous injections the first two or three weeks and occasional injections over a long period of time.

Since oral therapy would have the advantage of convenience, economy, and possibly more immediate effect, a trial with antihistamines was undertaken. The first patient was a cook from a remote ranch in Mexico where injection treatment would have been impractical. The results in this instance were so prompt and satisfactory that a further trial in other patients seemed warranted.

Candidates for treatment were chosen on the basis of the characteristic history.

Diagnosis

One cannot improve on the original description of histaminic cephalgia made by Bayard T. Horton in 1941.[1] The essential features of the affliction are these: The condition occurs almost exclusively in men, usually in the fourth or fifth decades, without family history or other known predisposition. It is a unilateral, rarely bilateral, excruciatingly severe head pain occurring most commonly at night, starting abruptly shortly after the victim falls asleep, lasting only 15 minutes to an hour or so, often eased by sitting up, often recurring when the patient goes back to sleep. There is lacrimation, conjunctival injection and coryza on the affected side. Aura, scotomata, and nausea usually do not occur. The attacks come in clusters, every night, or nearly every night for perhaps weeks at a time. Then an unexplained remission of months or years may occur before the next group of attacks. The pain is so severe that suicide has been contemplated by some of the sufferers.

Horton first separated these cases from the much larger group of migraine or migraine-like headaches. Some[2] still think that histaminic cephalgia is a variant not distinguishable from migraine and does not deserve a separate classification. In the author's opinion it represents a distinct entity. The history is usually clear-cut, definite, and characteristic. Cases where the diagnosis was doubtful have been infrequent. The incidence may be inferred from Table 1. In a practice limited to internal medicine (age 12 and over) almost all patients were questioned regarding present or past history of significant headaches. Two hundred and eighteen gave a history consistent with migraine or probable migraine. Only 20 gave a history of histaminic cephalgia. A glance at Table 1 will show that there was a significant difference in the sex incidence of the two disorders. Almost half of the histamine headaches occurred in males in the fifth decade while most of the migraine patients were females in the third to sixth decades.

Physical examination and routine laboratory findings are not remarkable when the patient is not in an attack. During an attack, the conjunctival injection, lacrimation, and coryza are the only findings. So far as the author knows, autopsy examination has not been obtained.

The usual treatment recommended by Horton[1] and subsequently by most medical textbooks came about as a result of Horton's original study of this condition. He found that the headache was reproducible by injections of histamine, but that in order to continue to reproduce the headache in a given subject, increasingly larger doses of histamine were required. A schedule of two bidaily subcutaneous injections for 10 days to 3 weeks, of small but gradually increasing amounts of histamine diphosphate was rec-

Table 1.

Age and Sex Incidence of Migraine and Histaminic Cephalgia in 7000 Adult Medical Patients

	12—19	20—29	30—39	40—49	50—59	60 and over	Age not Recorded	Total
Migraine								
Male	4	10	10	11	5	2	3	45
Female	5	31	46	47	32	6	6	173
Histaminic Cephalgia								
Male			4	9	2	2	1	18
Female			1			1		2

ommended as therapy. It was found that when a patient was so "desensitized" the headaches no longer spontaneously occurred. Repeated injections however at longer intervals for weeks, months, years, or lifetime, were recommended to avert relapse.

The use of antihistaminic drugs to relieve histaminic cephalgia has received comparatively scant attention. McElin and Horton[2] in 1945 felt that Benadryl was of limited value. In a recent article Horton[3] does not mention antihistamines for histaminic cephalgia; nor does Wolff[4] in his monograph on headache; on the other hand, Goodman and Coonrad[5] in 1947 found that in 3 patients subject to histaminic cephalgia, the syndrome could not be produced by the injection of histamine if Benadryl were given an hour beforehand. Moench[6] attributes prompt relief to Benadryl and Pyribenzamine. Among a number of textbooks of medicine and reference works, one[7] mentions the antihistamines favorably; some[8,9,10] unfavorably; most[11,12,13,14,15] do not discuss them at all in the treatment of histaminic headache. Many do not even mention the syndrome.

Method

The diagnosis in the present series was made on the basis of the characteristic history. In only the first case was an attempt made to evoke a headache with histamine. The resulting agony was so intense that the author lost his enthusiam for producing the headache in subsequent patients. A complete physical examination and routine laboratory studies including blood count, urinalysis, sedimentation rate, serological test for syphilis, and fluoroscopy of the chest completed the initial study of each patient. In several, skull, sinus and dental roentogenograms were obtained.

Antihistaminic drugs were then prescribed in an amount usually double the ordinary therapeutic dose, and their administration was scheduled so that the patient would be under their effect at the time the headache was expected. For example, if headache usually occurred shortly after bedtime at 9 PM, Benadryl (diphenhydramine hydrochloride) in a dose of 100 milligrams was given at 8 PM; and, in order to maintain the antihistaminic effect through the night, enteric coated Benadryl, 100 milligrams, was given at the same time. If the headaches tended to escape from control during other hours, sometimes the drug was administered on an around-the-clock basis or on p.r.n. basis to be taken when the headache occurred. It was never given on a routine three-times-a-day-after-meals schedule, as it was felt that such administration would fail to cover those nocturnal hours when the headaches were most apt to occur. Benadryl (diphenhydramine hydrochloride) and Pyribenzamine (triplennamine hydrochloride) were the drugs usually employed, though an occasional patient was treated with Thephorin (2-methyl-9-phenyl tetra hydro-1-pyridindene), Neoantergan (pyrilamine maleate) or Chlortrimeton (chlorprophenpyridamine maleate).

Results

A striking and welcome complete relief from headache occurred after the first dose in most patients. In others, relief occurred after the dosage was adjusted to cover different hours. In some, relief was not obtained even when the dose was increased to somewhat toxic levels.

In a few, after the initial course of antihistaminic therapy, treatment was discontinued and no relapse has occurred to date. In many, relapses have occurred, each relieved by resuming antihistaminic therapy. The results are summarized in Table 2. At least twelve out of the twenty cases may be considered successful in that the headaches were prevented or alleviated by antihistaminic treatment.

Toxicity was not serious. In one case where Pyribenzamine was used in excessive doses (up to 900 milligrams in 24 hours), the patient became confused and disoriented but recovered on discontinuing the medication. Another patient noted transient nausea and "jitteriness" on 100 milligram doses of Pyribenzamine.

Discussion

It is obvious from Table 2 that antihistaminic therapy will not always prevent or relieve the pain of histaminic cephalgia. In twelve of twenty patients, however, therapy was successful; in 2 other cases improvement was moderate or transient. The immediate advantage of antihistamine therapy is that, if effective, it is effective at once instead of in 10 to 20 days. Furthermore it is oral, economical, required no maintenance dosage and may be used in recurrences. According to Horton the desensitization technique relieves 95 per cent when first used but in relapses is somewhat less successful. Those patients relieved by the antihistamine drugs in this series usually found relief with antihistamines in relapses.

The following points should be emphasized: First, the dosage should be timed so that the effect of the drugs is exhibited at the time the headaches are expected. Second, dosage should be substantial, later reduced perhaps if successful results are obtained. Third, since the antihistaminic remedies are simple and prompt they should be tried first in histaminic cephalgia; but since they are ineffective in a minority of cases, those patients not relieved should then be offered histamine desensitization.

Summary

The antihistamine drugs were effective agents in relieving the pain of histaminic cephalgia in 12 out of 20 patients.

The drugs were administered in large doses and the dosage was scheduled so as to anticipate the expected time of the attacks of pain.

Table 2.

Results of Treatment of Twenty Cases of Histaminic Cephalgia With Antihistaminic Drugs

Name	Age	Sex	Duration	Previous Treatment	Present Treatment	Results in First Night	Results in First Month	Results, late Recurrences	Duration of Follow-up
E. G.	42	M	3 months	None	Benadryl Pyribenzamine	Relief	Relief	Relief	7 years
G.P.A.	40	M	Few days	None	Thephorin	Relief	Relief	Relief	6 years
S. A.	31	M	3 years	Histamine	Pyribenzamine Chlorotrimeton	Failure	Failure	Failure	6 years
J. C.	50	M	20 years	None	Benadryl	Relief	Relief	Relief	7 years
W. C.	55	M	Few days	None	Pyribenzamine	Relief	Relief	Relief	3½ years
L.M.C.	NA	M	NA	Histamine Testosterone Hapamine Antihistaminic daytime	Pyribenzamine	Relief	NA	NA	0
Z.J.E.	47	M	4 years	Cafergone	Pyribenzamine	Relief	Improved	No Recurrence	5 years
L.A.F.	63	M	3 weeks	None	Pyribenzamine Chlorotrimeton	Improved?	Failure	Failure	2 years
C. G.	41	M	20 years	Gynergen Rx of teeth, eyes, sinuses, etc.	Pyribenzamine Chlorotrimeton Benadryl	Failure	Failure	No Recurrence*	18 months
R. H.	36	M	12 years	Histamine	Pyribenzamine	Relief	Relief	No Recurrence	20 months
A. J.	46	M	11 years	Histamine Hapamine Gynergen	Neoantergan	Doubtful	Failure	Recurrence	7 years
T.E.M.	37	M	9 years	Gynergen	Benadryl	Relief	Relief	Relief	7 years
R.F.W.	43	M	12 years	Cafergot Demerol	Benadryl Chlorotrimeton	Relief	Relief	Relief	1 year
E.N.M.	60	F	5 years	Neosynephrin Aspirin	Pyribenzamine	Relief	Relief	Relief	3 years
E.H.V.	47	M	2 years	Histamine	Benadryl	Relief	Relief	Relief	
G.I.M.	40	M	5 years	None	Pyribenzamine	Relief	Relief	No Recurrences	6 years
B. O.	60	M	2 years	Histamine	Pyribenzamine	Relief	Relief	No Recurrences	18 months
J. P.	32	F	5 years	Various	Chlorotrimeton Pyribenzamine	Failure	Relief	NA	0
R.C.M.	43	M	8 years	DHE45 Histamine	Chlorotrimeton Pyribenzamine	Relief	Usual Relief	Failure	13 months
S. C.	39	M	5 years	Histamine Histapon, etc.	Pyribenzamine	Failure	NA	NA	0
TOTAL RELIEVED						14 out of 20	13 out of 17	12 out of 17	

*Listed as a failure though his headaches stopped before histamine desensitization was started.
NA—Not available.

Antihistamines in appropriate dosage and time schedules are recommended as first treatment in histaminic cephalgia with the desensitization technique of Horton reserved for treatment failures.

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HYPOTENSIVE AGENTS

Prolongation Of Action of Hypotensive Drugs

Smirk, F. H., Lancet 2:695, 1952

The hypotensive action of hexamethonium bromide administered subcutaneously can be prolonged by giving the agent in 25 per cent dextran of molecular weight 20,000 or in 25 per cent polyvinylpyrrolidone (PVP). Further prolongation can be obtained by addition of 1:2000 ephedrine hydrochloride solution to the dextran or PVP—hexamethonium solution.

Clinical Clippings, January, 1953.

Cataract Surgery

By Kenneth L. Roper, M. D., M. Sc. (Med.), Associate Professor of Ophthalmology, Northwestern University Medical School, Chicago

We study the cataract operation to improve our results. Developments and improvements in anesthesia and asepsis have made for better results and have proven to be the most important links in the chain of events leading to the successful closure of the cataract wound with sutures.

If we look for the explanation of the fact that some surgeons have better results than others, we shall find it in a multitude of details rather than in some special procedure. I will make no attempt to review all of the details involved in the various steps of the cataract operation, but will choose some of the situations that I feel need attention.

Preliminary or "Basal" Anesthesia

I particularly want to stress the wisdom of careful preliminary or "basal" anesthesia. Poor results in cataract surgery are too often attributed to poor cooperation on the part of the patient. I am not convinced of this. Every patient about to undergo cataract surgery is disturbed and apprehensive — which serves to emphasize the importance of careful psychological preparation. A few carefully chosen words can be as potent as any sedation. Death can be caused by over sedation. Vocal is as good as local and better than general.

Without careful pre-anesthetic preparation, good anesthesia and akinesia is rarely obtained regardless of the anesthetic agent used.

Eye surgeons use a surprising variety of drugs in the preparation of their patients for operation, for anesthesia, and for the prevention of nausea and vomiting, yet the procedures used in operations are more uniform.

Atkinson[1] polled a large cross section of ophthalmologists in the United States and found of the 30 different drugs reported as being used pre-operatively to produce sedation and analgesia, by far the most popular were Nembutal and Demerol. Seconal was next in favor. Chloral hydrate was the only other sedative used by any appreciable number.

Two hours before the operation I give 30 grains of chloral hydrate by rectum (low retention enema — not suppositories). I particularly call your attention to the use of this old safe and reliable sedative and hypnotic agent. Chloral hydrate rarely causes excitement or delirium, and it is an excellent alternate for the barbiturates, particularly for elderly patients. A half hour later (1½ hours before the operation) I give three grains of sodium amytal by mouth accompanied with a cup of hot tea and toast.

To help produce the sedative effect desired, the patient should be kept quiet with no visitors or activity in the room. Impress upon the nursing staff the fact that the cataract operation actually starts with the preliminary medications while the patient is still in his room.

For those who use Nembutal and Seconal it is well to remember that they are short-acting barbiturates having maximum effect in 90 minutes. They should be given 1½ hours before the operation — timed so the beginning of the maximum effect coincides with the start of the topical anesthesia.

Demerol has potent analgesic properties but only slight sedative action. It should be given 1½ hours before surgery and since its sedative effect is so slight it is best to accompany it with a barbiturate for ample sedation.

Nausea and Vomiting

Nausea and vomiting are often no surprise when they occur. We have all seen the father fall and have to have more sutures than the baby. That is a reaction to an operation without drugs being administered. Most reactions are not reactions to drugs — they are reactions to procedures. In most instances it is probably functional and due to apprehension and fear. Ocular pain of much severity following an operation must arouse in patients the fear that an organ as delicate as the eye may be ruined and so stimulate nausea. It is better to prevent vomiting than to treat it after it occurs.

I have never found it necessary to adopt the routine use of any drugs pre-operatively for this purpose. I feel that careful pre-anesthetic preparation and good anesthesia with the elimination of post-operative pain are good insurance against nausea and vomiting.

For those who feel the need of some pre-anesthetic drug to prevent nausea and vomiting following surgery under local anesthesia either Dramamine (50 mgm.) or Phenergan HCL (12.5 mgm.) is best. Thorazine must be used cautiously. It potentiates the effects of other drugs and for this reason only 15 to 25 mgm. dose should be used.

Local or Topical Anesthesia

Most intraocular operations on adults can be done safely and painlessly with local anesthesia. Atkinson[1] found that 93.2 per cent of the ophthalmologists he communicated with use local anesthesia and 6.8 per cent prefer to have the patient unconscious.

Random notes prepared for presentation before Special Scientific Session of The Southwestern Academy of Ophthalmology and Otolaryngology held during the 1955 Annual Meeting, Southwestern Medical Association, Phoenix

General anesthesia can be said to "have its place." If you have a psychopath, a child, a truly "uncooperative" patient, a "bouncer" or somebody such as that, you are probably justified in putting them to sleep; but only if you have adequate retrobulbar and topical anesthesia first; also, an endotracheal tube in place. Sodium Pentothal seems to be the agent usually chosen for general anesthesia.

For topical anesthesia I employ 0.5 per cent tetracaine hydrochloride. Many surgeons use a stronger solution of tetracaine. For example, Atkinson[2] advocates one or two per cent tetracaine. I prefer repeated instillations of a weaker solution.

Three new compounds all used in concentrations of 0.5 per cent are worthy of mention. Dorsacaine (Smith-Dorsey)[3], Dyclone (Pitman-Moore)[4], and Ophthaine (Squibb)[5]. Dyclone and Ophthaine can be used in patients sensitive to Dorsacaine, Tetracaine and Procaine.

Many ophthalmologists still prefer four to five per cent cocaine, for which they cannot be particularly criticized. Cocaine dilates the pupil and may influence intraocular pressure. More important it causes desiccation of the corneal epithelium and may devitalize the cornea, which could tend to retard healing. It does produce deeper anesthesia.

Akinesia of the Seventh Nerve

Koller[6] introduced cocaine as a topical anesthesia in 1884 and soon after that Hall[7] reported injecting cocaine to produce a nerve block. Nevertheless it was 30 years later before any block of the facial nerve was suggested.

I employ the simple method described by O'Brien[8] for obtaining akinesia of the seventh nerve. In gentle closure of the lids only the orbicularis is acting; while in forced closure of the lids other muscles come into play. This entire group of muscles, which act in forced lid closure, is supplied by the temporofacial division of the seventh nerve. The injection for akinesis of the temporofacial division of the facial nerve should be made over the anterior half of the condyloid process of the mandible. Injections over the posterior half of the condyloid process fail to produce akinesis.

Procaine (Novocaine) is the most widely used anesthetic for injection — in strength of two or four per cent. Xylocaine has become increasingly popular. Opinion varies as to what strength to use. According to Sadove[9], two per cent has no place around nerve trunks larger than a finger, such as the sciatic. One per cent is quite satisfactory about the eye he feels. If one is careful to place his anesthetic solution in the proper place rather than use a stronger solution of the drug, he will obtain good anesthesia and lessen the incidence of toxic reactions. Don't send a man to do a boy's job.

Epinephrine: The advantages to the addition of epinephrine to the anesthetic solutions are that it retards its absorption, hastens, intensifies and lengthens its action.

Wydase: The addition of 6 to 10 turbidity reducing units per cubic centimeter of anesthetic solution causes a greater diffusion of it which enhances anesthesia and akinesia. The added profound hypotony which occurs gives us added insurance against vitreous loss in particular. Hyaluronidase shortens the anesthesia time which is my excuse for not using it in my facial nerve injections. I advocate its use in retrobulbar injections.

Novocain-Pontocaine-Cobefrin Solution

I would like to call attention to a preparation I have employed for over ten years for my subconjunctival and subcapsular injections in cataract surgery. Novocain-pontocaine-cobefrin solution is used extensively by the dental profession for giving prolonged local anesthesia. I first saw Kirby use it. With our usual concentrations of novocain we get the required depth of anesthesia but we often fail to obtain the necessary duration of anesthesia. That this anesthetic seems to meet these requirements is worthy of mention. From the very beginning of my use of this injection, I was impressed with the fact that all the patients had little ocular pain during the first three to six hours after operation.

Retrobulbar or Cone Injection

I believe that the most commonly used retrobulbar injection is intermediate in depth between the apical injection advocated by Harold Gifford[10] and the anterior retrobulbar injection of O'Brien[8b]. I aim to make my retrobulbar injection in this intermediate area of the muscle cone about one centimeter behind the globe. I employ about 1.5 cc of four per cent procaine to which epinephrine and Wydase have been added. Deep anesthesia, oculomotor paresis, and hypotony result.

Scheie[11] has recently reported a method for maintaining continous retrobulbar anesthesia. The criteria for its use does not seem to apply to cataract surgery.

Subconjunctival-Subcapsular Injections

In the past subconjunctival injections of drugs to induce anesthesia of the anterior segment have been made near the limbus. However, Swan and his associates[12] have shown that forward subepithelial injections are less effective than anterior subcapsular injections in inducing the penetration of drugs into the iris and anterior segment.

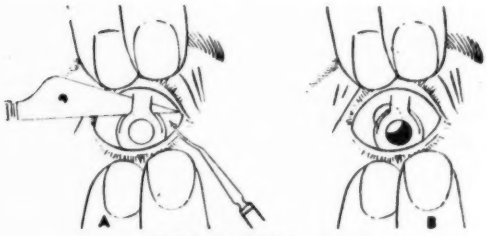
After listening to Swan's recent paper on the subject and viewing his slides I realize that what I have referred to in my cataract work as a "subconjunctival

injection" has actually been a subcapsular injection. I pass the needle through the bulbar conjunctiva and Tenon's capsule in the inferior temporal quadrant near the fornix. The anesthetic solution is injected posteriorly between the capsule and the sclera to block the ciliary nerves. The injection is also made in the superior temporal quadrant near the fornix where it can also be passed posteriorly to block the superior rectus.

Suturing in Cataract Surgery

When one ponders the fact that the surgical treatment of cataract dates back some 3000 years or more, it is hard to believe that it was not until 1865 — 90 years ago — that any suture was employed in the closure of a cataract incision. Because of a continued desire for greater security in the cataract operation, many modifications of the earlier operations were proposed.

The earliest known modification for the purpose of greater security was that of Desmarres[13] in 1858 (Fig. 1). While he employed no suture, he attempted to improve the closure of the cataract incision by utilizing conjunctival tissue in the form of an unseparated bridge beneath which the cataract was extracted. It is doubtful that a conjunctival bridge or any of its modifications are employed to any extent today, but it is interesting to note that it has had its advocates until very recent years.



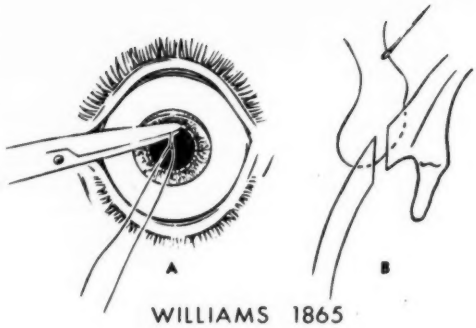
DESMARRES 1858

FIGURE 1

A. Cataract incision with Beer's knife (kératotomie supérieure) and conjunctival bridge upward. B. Cataract delivered beneath the conjunctival bridge.

The second important attempt at greater security in the cataract extraction was the corneal suture of Williams[14] in 1865 (Fig. 2). By 1869 Williams[15] had abandoned his corneal suture in favor of a conjunctival suture placed in an extension of his corneal flap at its apex (Fig. 3).

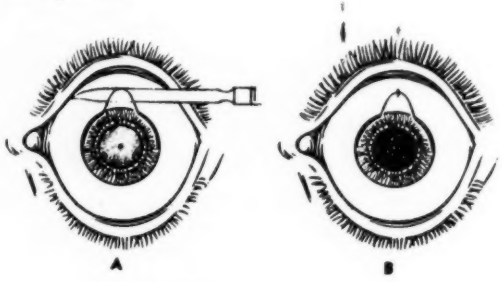
In 1888 Mendoza[16] introduced the first preplaced suture technic. His prepared groove was entirely in the cornea (Fig. 4).



WILLIAMS 1865

FIGURE 2

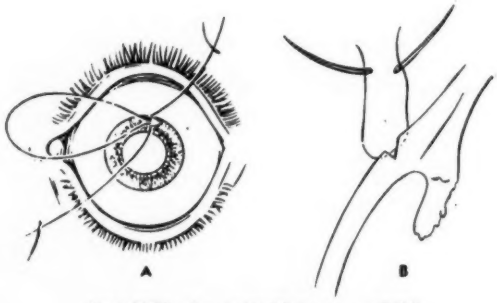
A. Passage of the suture through the apex of lower corneal flap. B. Schematic cross section of passage of suture, which is deep but does not enter the anterior chamber. Note the straight needle 1/4 inch long which was fashioned from the head of the finest sewing needle.



WILLIAMS 1869

FIGURE 3

A. Corneal section extended at its apex a little way into the conjunctiva. B. Single suture placed in the conjunctival appendage after the extraction.



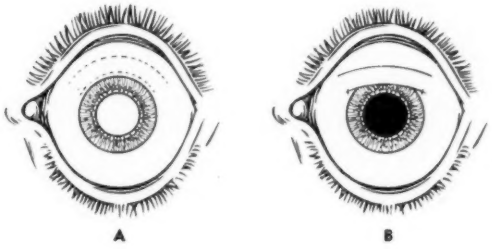
SUAREZ de MENDOZA 1888

FIGURE 4

A. Needles of a double-armed suture passed through each lip of a prepared groove in the cornea. B. Schematic drawing showing prepared groove in cornea and course of preplaced suture.

Sliding Conjunctival Flaps

Sliding conjunctival flaps were a great deal more popular and also more effective than simple conjunctival sutures. Kuhut's[17] bridge operation despite early acceptance, did not meet with continued favor (Fig. 5).

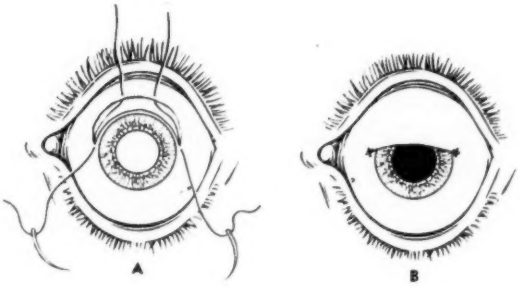


KUHNT 1905

FIGURE 5

Double pedunculated conjunctival flap. A. The dotted lines indicate the two curved incisions of the conjunctiva a short distance from and parallel with the limbus. B. The flap drawn down over the wound and sutured near the attached ends to the conjunctiva of the eyeball.

In 1911 Van Lint[18] introduced his sliding conjunctival flap. It is a simple procedure and has many advantages over other types of conjunctival flaps (Fig. 6). The late Sanford R. Gifford[19] employed this type of flap and many of his followers in the Northwestern group still do.



VAN LINT 1911

FIGURE 6

A. Conjunctiva undermined and sutures inserted. B. Sutures tied with incision covered.

In 1894 Kalt[20] described the first corneoscleral suture (Fig. 7). Since it was a preplaced suture, its principal advantage was the same as that which Mendoza[16] claimed for his suture proposed five years previously. By 1910 Kalt[21] had modified his procedure in that his suture consisted of a vertical corneal portion and a transverse episcleral portion.

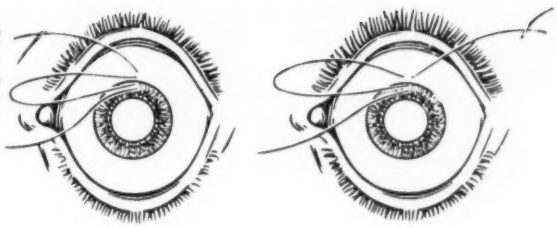
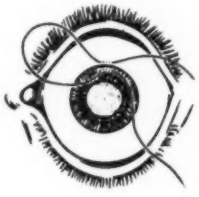


FIGURE 7

Kalt originally inserted both the corneal and scleral portions of his suture vertically. Later he passed the episcleral portion horizontally.

Historical "untruths" are hard to destroy, but the evidence suggests that two American ophthalmologists (Ziegler[22] and Stevenson[23]) anteceded both Liegard[24] and Stallard[25], usually credited with the modification of the Kalt suture wherein both corneal and episcleral bites run horizontally (Fig. 8).



S. L. ZIEGLER 1890
Philadelphia

MARK D. STEVENSON 1912
Akron, Ohio

H. LIEGARD 1913
France

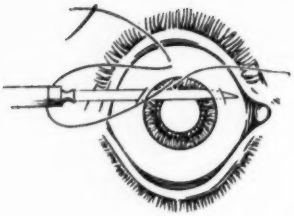
H. B. STALLARD 1938
England

FIGURE 8

Two American ophthalmologists anteceded both Liegard and Stallard, usually credited with the modification of the Kalt suture wherein both corneal and episcleral bites run horizontally.

The security afforded by placing a stop-knot in one end of a corneoscleral suture appeals to many. Frish[26] reported this modification of Kalt's original suture in 1922 (Fig. 9). Gomez-Marquez[27] as well as Mullen[28], O'Brien[29], Lee[30], and Stallard[31] were all much later in writing of their stop-knot modifications of the original Kalt suture (Fig. 10).

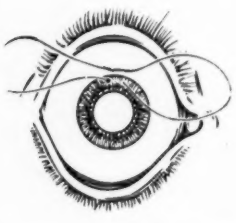
Interest in corneoscleral suturing was greatly stimulated by McLean's[32] description of his suture in 1940. He originally used a single preplaced corneoscleral suture, but he now employs two in ordinary cases, three in difficult ones[33].



FRISCH 1922
GOMEZ - MARQUEZ 1932

FIGURE 9

A modification of Kalt's original suture wherein both the corneal and episcleral bites were vertical but with a stop-knot added to corneal end of suture. Gomez-Marquez added interrupted conjunctival sutures at the finish.



MULLEN 1944
O'BRIEN 1947
LEE 1947
STALLARD 1950

FIGURE 10

A still further modification of Kalt's suture wherein both the corneal and episcleral bites are placed horizontally. The safety feature of a stop-knot at the temporal extremity of the corneal portion of the suture as first suggested by Frisch is included.

Postplaced Sutures

Many experienced surgeons insert their sutures after the section is completed. The increased sharpness and delicacy of the atraumatic corneal needles available today greatly facilitates their introduction after the section is made. However, judging from my own experience and observation, sutures introduced at this stage are much less accurately placed. Postplaced sutures offer a serious mental hazard to the surgeon.

Czermak[34] in 1888 was the first to use a postplaced suture but he later abandoned the method. Kirby was probably the greatest exponent of postplaced radial appositional corneoscleral sutures. Some surgeons use a combination of preplaced and postplaced sutures, and thus feel that they combine the advantages and obviate the disadvantages of either method.

Perera[35] in 1948 described a seemingly safe method of inserting postplaced appositional corneoscleral sutures close to the extremity of a keratome incision with or without a conjunctival flap. Kirby[36] referred to it as a method whereby the only real objection was removed to the placing of sutures after the section was made.

Single or Multiple Sutures

The argument "single or multiple sutures" still goes on unabated. If one studies the more modern concepts of wound healing he gains a better appreciation of the first or lag period when the lips of the wound should be kept in firm close apposition by sutures to insure normal healing by first intention. We should therefore be interested in the immediate strength of our sutured wound.

Increasing the number of interrupted sutures used produces greater wound strength. Each suture adds strength to the suture line, but this capacity becomes greater only when the load is distributed.

Two closely inserted double-armed sutures, or one single suture in the 12:00 o'clock position, can hardly be expected to give the strength of closure of two single interrupted sutures at the 10:00 and 2:00 o'clock positions. Nor could the latter be expected to give the strength of closure of three single interrupted sutures at the 10:30, 12:00 and 1:30 o'clock positions.

The Importance of the Conjunctival Flap

Modern cataract wound closure involves more than sutures — important is the conjunctival flap. It has not only mechanical and surgical significance but plays a histologic role of extreme importance.

Investigators since the beginning of this century and more recently Dunnington and Regan[37] have demonstrated most conclusively how the important initial closure of a wound covered with a conjunctival flap takes place through the formation of a fibrovascular plug of episcleral tissue and how such wounds heal more promptly and more securely than do corneal incisions.

Most clinical investigators[38] also conclude that the best preventive measure against epithelial invasion of the anterior chamber following cataract extraction is the use of some type of preformed conjunctival flap which will cover the entire section. This is an important thing for the surgeon to remember who is frequently confronted with a flat chamber since epithelial downgrowth is most apt to occur in the presence of a persistent flat chamber.

Author's Technic of Suturing

I refer to my own suture technic as one of multiple preplaced appositional, nonperforating, corneoscleral sutures combined with a conjunctival flap. I employ three main sutures. Short preliminary grooves are made at the 10:30, 1:30 and 12:00 o'clock positions about 0.5 to 1 mm. behind the limbus. For this purpose I employ the Lancaster guarded scleral knife.

The guarded blade is set and the incision is made obliquely and at about the plane of a keratome incision. With the Lancaster guarded scleral knife the unwelcome complication of inadvertently penetrating the anterior chamber is eliminated.

The sutures are placed in solid corneal and scleral tissue and not in loose yielding conjunctiva or in insecure episcleral or limbal tissue. To eliminate the hazards of manipulating the opened eye the sutures are placed before the section is made. They are so placed that they pass through and not over the lips of the wound. When so placed and tied they bring the tissues back to their exact preoperative position. The entire wound is also covered by a conjunctival flap, which affords added protection and better surgical closure (Figs. 11, 12, 13).

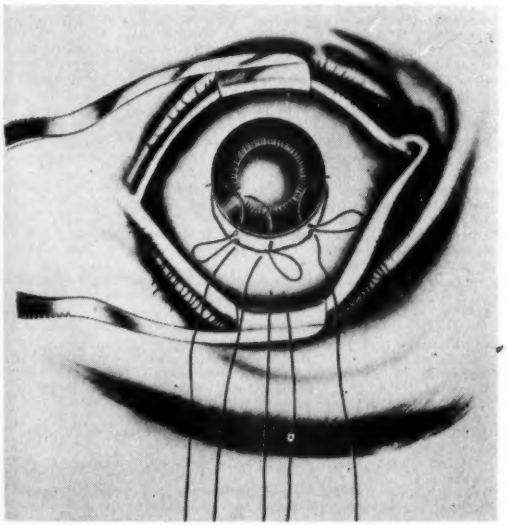


FIGURE 11

Technic of placing corneoscleral sutures.

Keratome and Scissors Section

Specially designed right-sided (R) and left-sided (L) angular scissors used in enlarging the section have been made for me (Fig. 14). They have proved extremely helpful for enlarging the corneal section, particularly by the technic illustrated in Fig. 15, after entering the anterior chamber with a small angular keratome between any two of the sutures.

Scissors commonly employed for this purpose are too light. Strong scissors are better for cutting through the sclera, especially when it is desired to cut it on the same plane as that followed by a keratome incision. The buckling of scissors that are not heavy enough results in a ragged section and in serious bruising of wound lips. No finger pressure should have to be made upon a pair of scissors to keep the jaws from spreading.

My scissors are used as a pair. The blade which is introduced into the anterior chamber on both the right-sided and left-sided scissors is the lower and longer blade, permitting a continuation of the section at the same level or plane on both sides of the keratome incision and without having to reinsert the scissors into the chamber with each snip.

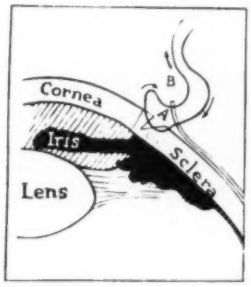


Figure 12

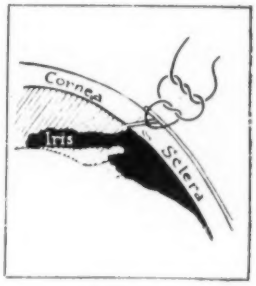


Figure 13

FIGURE 12

Schematic drawing. A. Preliminary groove by Lancaster guarded scleral knife. B. Course of needle and thread passing first through the edge of the conjunctival flap above and then through both scleral and corneal lips of groove. At completion of operation each suture is passed back through edge of conjunctival flap above. It should be noted that the conjunctival flap, and therefore the course of the sutures, differs from that described by McLean.

FIGURE 13

Schematic drawing showing closure obtainable after extraction of lens; lips of wound are back in their exact preoperative position and covered by conjunctiva.

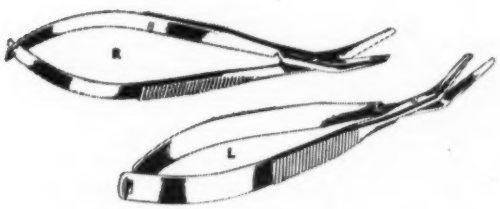


FIGURE 14

Specially designed right (R) and left (L) angular scissors for enlarging corneal section. Blades are angulated, 14 and 16 mm. long, with smoothly rounded points like a spatula, enabling their easy introduction into the anterior chamber without injury to corneal endothelium or iris.

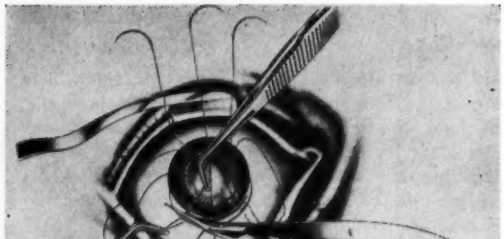


FIGURE 15

Completing section with scissors, opposing loops of sutures being held apart.

Summary

Certain facts and conclusions can be drawn from the foregoing random remarks.

The major factor in the causation of poor wound healing is a lack of firm coaptation of the wound. Firm coaptation of the wound depends on:

1. Accurately placed and firm corneoscleral sutures combined with a conjunctival flap.

2. Removal of extraneous material from the lips of the wound — meticulous toilet.

I will go so far as to say that nowadays the ophthalmic surgeon is almost guilty of malpractice if he does not employ some type of corneoscleral suture.

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Athletic Injuries to the Knee Joint

By Rex J. Howard, M. D., Fort Worth

This paper has as its purpose to stimulate the interest of orthopedic surgeons in treatment of athletic injuries to the knee joint; especially to better the relationships between our profession and the coaches. We feel that there is sufficient evidence to prove that adequately treated injuries to the knee joint in athletes, especially in college, and most especially in football, heal quicker and cause less disability when treated adequately so that ruptured menisci or torn ligaments and chipped articular cartilages are repaired.

For this reason, we feel it is important that it be explained to the coaches that knee injuries be properly diagnosed; and those in which there is a mechanical disturbance of sufficient degree that it will further destroy the knee joint to participate in athletics, that the condition be corrected.

Twisting Injuries

The majority of these athletic injuries, in college especially, are football players; the primary reason being, that the foot is fixed to the ground with a long cleat. The patient is hit from the front, or from the side, or a combination of both, and his trunk is spun and there is a twisting injury with a direct force on the knee joint.

In our experience, we have found that quadriceps exercises are useful for the early treatment of injuries to the knee joint. They are useful to determine if the patient's quadriceps function is sufficient to return to athletic endeavor, and by the use of this test, the patients are not returned to athletics with a weakened knee joint, and severely injured before they are allowed to become well. We also use quadriceps exercises for diagnosis of injuries to the knee, as well as post injury and post-operative follow-up.

Various Traumas

The effections of the knee joint are torn menisci, medial primarily; but considerable numbers of silent lateral tears are also present; and it is not unusual to find both medial and lateral meniscus torn in this type of patient. The most severe injuries, of course, cause tears of the medial collateral ligament and the cruciates.

The symptoms that these patients present, of course, are swelling, locking, weak quadriceps, vague pains, feeling of something wrong and clicking in the knee joint.

A diagnostic test that we have found especially useful, we attribute to Dr. Edwin F. Cave in Boston, and that is, with the patient sitting, and palpating behind the medial collateral ligament on the upper edge of the tibial plateau. Swelling can be felt in this area when there is a tear of the meniscus, due to the swelling of the capsule in this area.

X-ray Recommendations

In x-raying these knees, we recommend AP and lateral, tangenital view and notch view of all the knees, because we have, a number of times, made diagnoses especially in traumatic exostosis of the patella, with the tangenital view, and also, loose bodies can easily be seen with the notch view.

We do not hesitate, when we find that patients have torn meniscus, to remove the medial one, and a search for the lateral one, and if we find the lateral portion of the patella, or the lateral femoral condyle to be roughened, we suspect the lateral meniscus to be torn. We do not hesitate to remove both of them, and have not found this to be disabling.

In our post-operative follow-up, we have used crutches until the patient's quadriceps strength is returned to 50 per cent or normal, and have found that this prevents swelling. We have the patient bear weight, only put the crutches down to prevent excessive motion of the knee in case he slips or turns. Post-operatively, in these patients who have chondromalaciae of the patella, we give them static resistance exercises. Again, we use our quadriceps exercises to determine if the function has returned sufficiently for the patient to be allowed to return to full activity. We feel as DeLorme has stated, that the quadriceps should be strengthened to at least as strong as it was prior to the time of injury as judged by the good leg.

Problem of Incapacity

Again, we would like to say that knee surgery, in itself, is not incapacitating. We feel that the problem of incapacity following athletic injuries is those patients who have not been adequately treated, and consequently, further damage is caused to the knee joint and prevents them from participating in athletics; that is, the function is not restored and further damage is caused. It has been our observation, 100 per cent without fail, that those patients who have any large amount of damage to the condyles, or the tibia, or the femur, or damage to the cartilage of the patella, are not able to regain sufficient strength in their knee to play football, and consequently, have subsequent injuries and become disabled.

the coaches to this fact, and teach them what we have

Again, we reiterate that it is our duty to educate to offer them, to return their patients to duty faster, and prevent severe damage that will bother the athlete later on in life.

In closing, we feel that a working relationship between orthopedic surgeons and coaches can be best bettered by a cooperative program aimed at understanding the problems of the two in combining their efforts to prevent severe athletic injuries, and also prevent pain and traumatic arthritis and disability in later life for these young athletes.

Clinical Note on Estrogen–Progesterone Therapy for Menopausal Complaints

By Joseph B. Raddin, M. D., Phoenix

Most women secure complete or satisfactory relief from menopausal complaints with an oral estrogen. The few women who fail to derive adequate control of one or more symptoms with an oral estrogen deserve, and there are other hormones available which will give them, greater freedom from the subjective aches and pains, 'nervousness', and functional disorders.

Currently much in use is a mixture of an estrogen and testosterone, given orally or by injection. These mixtures are useful additions to a physician's therapeutic armamentarium — if used when properly indicated. A relatively small number of women derive little benefit from oral or injectable estrogens or estrogen-testosterone mixtures. Undesired side-effects, such as hirsutism, are common.

Definition of Menopause

It is my interpretation of the word menopause that no woman enters her menopause until and unless ovarian function has ceased, and hence also, she has ceased to menstruate. This does not occur naturally until she has reached her late forties or mid-fifties. Women who have menstrual irregularities and menopausal-like symptoms at an earlier age should be diagnosed ovarian hypo-function.

The same is true of women who have undergone hysterectomy before the natural menopause. Ovarian hypo-function is usually secondary to anterior pituitary hypo-function — that is, inability of the gland to secrete adequate amounts of FSH (follicle stimulating hormone) and LH (luteinizing hormone). Hypothyroidism secondary to insufficient TSH (thyroid stimulating hormone) is frequently concomitant. Women suffering "early menopausal" complaints are often improperly diagnosed as "starting an early menopause." Women before fifty years of age regularly, in my experience, respond well to adequate anterior pituitary stimulating therapy. Naturally, there comes an age at which the ovaries are no longer able to respond to stimulation by the anterior pituitary hormones. Then the menopause has arrived, and amenorrhoea is permanent.

Why Do Estrogens Alone or in Combination With Testosterone Sometimes Fail To Give Relief To A Few Women?

With failure of ovulation at the menopause, there is a marked decrease in ovarian secretion of estradiol and progestin. This stimulates anterior pituitary secretion of large amounts of FSH and LH. This hormone imbalance is suspected by many endocrinologists to be the cause of menopausal complaints — not alone a deficiency of estradiol. Testosterone therapy is valuable, in small amounts, when osteoporosis is present.

Since testosterone has an effect antagonistic to estradiol, careful adjustment of the proportionate dosage of the estrogen to testosterone, and of the dose of the mixture, to the needs of each individual woman, is important. Estrogen alone or estrogen-testosterone mixtures, however, do not suppress LH secretion by the anterior pituitary.

Ideal Therapy

Ideal therapy, in my experience, for menopausal complaints is a mixture of both ovarian hormones — estradiol and progestin. Then both FSH and LH secretion by the anterior pituitary is inhibited. A useful mixture is 5 mg. Depo-Estradiol (Upjohn) plus 50 mg. Progesterone in oil. This dose, administered every four to six weeks, is remarkably effective for those women whose menopausal complaints have resisted other medication. It is more physiologic therapy and at a smaller dosage than an estrogen alone. Oral administration of adequate amounts of progesterone is expensive. It is more economical to give an occasional injection.

Suggestion

It is suggested that estradiol-progesterone therapy be tried in those few women who have not derived benefit from other forms of medication for menopausal complaints.

Abstract

USE OF METHALLENESTRIL (VALLESTRIL) IN CONTROL OF MENOPAUSAL SYMPTOMS

Goldfarb, A. F., and Napp, E. E.:
J. A. M. A. 161:616 (June 16) 1956

Menopausal symptoms in 100 patients between the ages of 35 and 62 years were treated with six mg. daily of methallenestril (Vallestril), a synthetic estrogen; a contra-test group of 20 patients received a placebo.

Good or fair results were obtained in 91 per cent of the test group in contrast to 15 per cent in the control patients.

The dosage schedule ran for 30 days, at which time medication was interrupted for two weeks and the need for a second course determined by the return or absence of symptoms. No patient was given more than three such courses in any four-month period.

Vaginal smears taken from certain patients objectively corroborated the subjective findings. An estrogenic response was evident after 10 to 14 days of medication and persisted for 16 to 30 days after cessation of therapy.

The dosage used did not cause withdrawal bleeding or any other untoward effects but generally gave a feeling of well-being. As is usual with all estrogens, the warning against unnecessarily prolonged medication is offered.

Odds and Ends in Occupational Medicine

By Jerome W. Shilling, M. D., Los Angeles

PART I

In another discussion we will cover some of the basic elements and broad principles of Occupational Medicine. Particular emphasis being directed toward the current trend, and objectives, with further emphasis on the salient and indispensable role played by the physician in private practice.

This discussion will keep closer in mind the physician who sees more than an occasional industrial case; the "on call" physician; those whose assignments include part time in-plant medical service, and those whose future will lead to a full time Occupational Medicine endeavor.

Johnstone, R. T.[1] states: "Obviously the future will include an ever expanding program of preventive medicine, encompassing the control or elimination of tuberculosis, cancer, heart disease, venereal disease, and other scourges; the future will continue to improve preventive measures against industrial injury or occupational illness; it will expand research in the field of industrial toxicology, but it will propose to do more, much more."

Future Foreseen

With the advent of more intricate and complex technical devices; more innate ability, training, and skill, is required in their successful operation. This means more selectivity, proper placement, and no effort spared in human maintenance. The breach created by the man not at his post is becoming more and more difficult to fill. Looking into the future it appears quite evident that this fact will continue to mount as time elapses.

Holmblad, E.[2] states: "The relationship of Industrial Medicine to all other specialties has a similarity to the specialty of Pediatrics. The Pediatrician consults with the Surgeon, Cardiologist, Radiologist, Urologist, Ophthalmologist and Neurologist in the care of the child up to 15-16 years of age. The industrial physician then has a similar relationship with all the specialties in the care of injuries and health of the worker during his life span of employment."

Specialties Listed

Although particular industries may require in preponderance respective specialists, in general experience has developed that specialties are required in frequency in about the following order: *1.* Surgeon—(General, traumatic, orthopedic, otolaryngologists, neuro surgeon, plastic and oral.) *2.* Occulists (eye injuries and refraction). *3.* Roentgenologist (particularly chest, spine and skull.) *4.* Dermatologist. *5.* Internists. *6.* Neuro-psychiatrists. *7.* Industrial hygienists and toxicologists. *8.* Physical medicine. Not infrequently, a team of specialists may be required in particular and special cases.

As an example a severe burn case may require the services of a surgeon, internist, ophthalmologist, plastic surgeon, physical medicine, and one or a group particularly equipped and adept in the principles of rehabilitation.

To well carry out the present concept, purpose and goal of Occupational Medicine it is incumbent upon the industrial physician to keep informed, if not abreast of all branches of medicine as medicine marches forward. An industrial physician who examines, diagnoses or treats industrial cases, or advises when an employee contemplates returning to work following absence from illness or injury, is necessarily considering all but the entire gamut of disease entities and injuries as he carries on from day to day.

Furthermore he must be well aware of the job requirements to which the individual is returning including the physical as well as the tension and exposure elements.

Thorough Knowledge

With the foregoing in mind the necessity of a thorough knowledge of work requirements and environment becomes clear. Such information is not realistically obtained by statements from the individual or by telephone conversation with his foreman.

For those of us engaged in this endeavor it is of necessity and is our duty to go into the plant whether there be 50 or 50,000 on the payroll. In this and only this way are we able to gain first hand, complete, and correct knowledge so essential to us in adequately evaluating, diagnosing, treating, and advising, in such a complex field.

In the great majority of instances, such plant visits will be welcomed and encouraged by the employee, employer, and if such is on the staff the plant engineer, the safety supervisor, and industrial hygienist as well.

The advantages, benefits, and necessity of such a routine and program are multiple and become increasingly evident, namely:

1. Initial overall concept of mechanical, and actual, or potential toxic exposures as well as physical and tension elements in conjunction with job requirements.
2. In no other way than by periodic "plant walks" are we able to keep abreast of rather frequent changes in machines and substances used.

3. Greater confidence in you is inspired in both the employer and the employee.

4. And, to repeat again, your position is much better when you see the employee in your office, the plant, the hospital, or in his home.

5. You are more fully recognized as an important functioning member of the whole team by all "players."

6. Finally, you circumvent a possible pitfall of ascribing a given illness or pathological state to occupational origin on the basis of exclusion of other disease entities. Remember occupational disease entities are well established, recognized, and diagnosed on history of actual exposure, laboratory and clinical findings.

It has been said that the greatest difference between the part time practice of industrial medicine by the general practitioner and the full time industrial physician is lack of familiarity with working environment of the employees they are treating.

In Court

In court there is not infrequently a breach in medical opinion incongruent to the point of difficult legal interpretation. In instances medical opinion is required in court and in general these opinions cover three questions:

1. Direct trauma; (liability not denied but degree of injury with its residual is questionable.)

2. Industrial hazard exposures and results; (special and complete knowledge is essential in this field.)

3. Relationship of trauma to communal disease (cardiovascular, degenerative, inflammatory, neoplasm, neurogenic, et al.)

Ever remember you are there to inform the court and not to win the case for the plaintiff or the defendant.

For those who are contemplating expansion of industrial endeavors, are planning, or are now engaged in in-plant medical service, the following are further pertinent considerations:

Economic elements including cost have been mentioned, however, further comments appear in order. During 1952 occupational accidents cost American Industry $45 per worker with 15,000 killed, 200,000 injured, and a 250,000,000 man day loss[3]. "Fringe" benefits amount to 18.7 per cent of the payroll or $644 per employee per year or $1,500,000,000 annually[4]. Measured costs are moneys actually spent and easily measured including medical care of injured, compensation, permanent disability or death awards, continuance of pay while not on job for other reasons, pension accruals, vacation, health insurance and service.

The hidden cost, difficult or impossible to measure is in the idle machine; the destruction of equipment; the training of replacements; the "standby" employee, and overtime; the product or service either not produced or curtailed and/or improperly produced and performed, and adverse effect on those (fellow employees) not directly involved. All this accounts for considerably more than the measured cost.

Twelve to One

Absenteeism related to non-occupational illness, injury, and extraneous interests or commitments compared to absenteeism related to occupational injury and illness is at a ratio of about twelve to one. The employer must consider the aggregate, including final cost and overall economic relation to the most efficient production or service.

As physicians, we must remember that management's concern, and what is at stake is a fundamental, and further that management is not particularly concerned whether Dr. Brown or Dr. Green directs health enterprises or treats injury cases. His primary and final concern is how, where, and with whom the best service for all in his particular organization is obtainable.

In formulating plans for in-plant medical service, I remind you again that the primary interest is in people, and that for the greater part, requirements are of basic nature and are identical in all industries. Other than this a medical department in industry must be molded to fit specific and special requirements of a particular industry, namely size, geography, exposures, (mechanical and toxic) and availability of consultation help.

Minimal Standards

The Occupational Health Institute has established minimal standards for industrial medical services in organizations having from 100 to 25,000 and over[5]. An organization meeting these minimum standards are so recognized, and an appropriate certificate of approval is awarded. A brief incomplete summary of these requirements is as follows:

1. The organization has a stated medical policy to include:

   A. Preplacement medical examinations including indicated laboratory procedures.

   B. Periodic medical examinations on all who are exposed to potential or actual industrial hazards. This to include all tests necessary as indicated by any of such exposures.

2. The professional staff is sufficient to carry out the above stated policy. Members of the medical and nursing staff are competent to perform duties prescribed in the stated policy. They are graduates of accepted schools of learning; are

in good standing, and licensed to practice in their respective states or provinces. In plants of 2,500 to 25,000 there is one full time doctor or equivalent for each 2,500 employees (the ideal is one doctor for each 1000 employees.)

3. Facilities are available for the performance of competent preplacement and voluntary periodic medical inventories. (In plants of 100 to 2,500 these facilities may be located within the confines of the plant proper or in the offices of the consultants or part time physicians whose duty is to carry out the prescribed medical policy. In plants of 2,500 to 25,000 these facilities are to be located within the confines of the plant).

4. A system of an adequate consultation staff is maintained. In plants over 2,500 the job descriptions of all key medical personnel are on record. When particular exposures so warrant industrial hygienists and sanitary engineers are included.

5. Sufficient attention is given to plant environment; i.e., sanitation, safety precautions, and industrial hygiene.

6. The medical director, medical advisor or chief medical officer report to some responsible member in management who is conscious and familiar with managerial interpretation of medical policy, and whose assistance can be relied upon to help maintain the aforementioned standards.

7. In addition to facilities for preplacement and periodic inventories, a well equipped dispensary for emergency care is maintained.

These requirements are so worded that every source and type of medical service available to industry can be utilized and accredited. For example, a small unit of 50 employees which has an established health maintenance program in effect for its employees can be given certification by the institute providing that:

1. Preplacement examinations are performed by a private practicing physician located in the vicinity of the operating unit.

2. Voluntary periodic inventories are made available to each employee, and these examinations are performed by a graduate medical doctor, capable and interested in the performance of such examinations from the standpoint of health maintenance.

3. Periodic health inventories are performed by professional people capable of doing so on all employees who are exposed to potential or actual occupational hazards.

4. First aid measures may be instituted quickly and effectively in the event of catastrophe.

5. All medical facts are confidential between the examining physician and employee.

6. Suitable consultants are available in event of need.

For certification a program of definitive care with the exception of care of industrial and occupational disease cases is not considered. This falls in the province of the employee and his personal physician.

Summary

In summarizing the current status of Occupational Medicine, it is becoming increasingly evident that, in addition to the necessity of effective and complete provision for the treatment of occupational diseases and injuries, there has been, and will continue to be, an augmenting trend toward prevention and human maintenance, taking into full account all related facets and ramifications. Additional elements not discussed in the foregoing include:

1. Health education (approach and methods must vary considerably according to local situations.)

2. Advice on personal problems, domestic and otherwise, with continual attention to extraneous environmental factors.

3. Recognition of alcoholism (problem drinking) as a disease, and that under adequate case finding, proper guidance, care and follow-up, the majority are amenable to cure or control with continued industrial usefulness, particularly when detected in the early stages when deflection is less difficult.

4. Rehabilitation and selective placement, measurement of the individual by abilities rather than handicaps.

5. Increased training facilities at undergraduate and post graduate levels, and within the factory.

6. Recognition that dependence on the individual, rather than the group, has resulted from recent and current industrial technology both mechanical and chemical.

7. An ever increasing liaison and rapport between employee, employer and physician.

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MONTHLY CLINICAL PATHOLOGICAL CONFERENCE
EL PASO GENERAL HOSPITAL

August 16, 1956

FREDERICK P. BORNSTEIN, M. D., EDITOR — CASE NO. 678

PRESENTATION OF CASE BY H. M. GIBSON, M. D.

History — Dr. Nathan Kleban

A 63-year-old Latin American widow was brought to the hospital by ambulance on June 9, 1956. That she had been sick for two years was the entire history that could be obtained.

Physical Examination:

T. (R) 98.8 R. 24 P. 84 B. P. 130/60

The patient was an acutely and chronically ill severely wasted woman in a state of semi-stupor from which she could be aroused. She did not appear to comprehend when spoken to nor the meaning of events around her. Breath sounds were distant, bronchovesicular, with scattered bilateral wheezes and inconstant fine moist basilar rales. Palpation of the entire abdomen, which was soft and flat, was resisted, particularly the right mid-abdomen. Here a firm, irregular mass, approximately 15 cm. in diameter, was palpated. The mass extended into the right flank and the lumbar region, was not attached to the skin or pelvic structures, did not pulsate and did not move with respiration. Normal bowel sounds were heard.

Hospital Course:

Rectal temperature ranged between 97.6 and 100.4 until the day before death when it reached 101.4. She was fed by mouth to some extent. There were incontinent green loose stools. The patient was seen by medical, surgical, and urological staff men. Neither bladder nor ureteral orifice abnormalities were noted during the course of obtaining retrograde pyelograms 10 days after admission. Abdominal pain, generalized, but more severe on the right, continued. Distended abdomen, tinkling bowel sounds, labored respirations, rapid pulse, and shock preceded death 11 days after admission.

Laboratory:

Hemoglobin 12.0 gms.; hematocrit 38; WBC 11,600; stabs. 3, segs. 72, lymphs 22, monos 3. Urinalysis: yellow, alkaline, cloudy. S. G. 1.014, albumin negative, sugar negative, WBC 5-6, RBC 6-8, no casts. Blood sent for serological test for syphilis but report is not on chart.

Chest film:

"There are several bilateral large, scattered, homogeneous circular nodules in the lung fields secondary to metastases, most probably from the G-U tract . . ."

Intravenous pyelogram:

"The inferior calyces on the right appear to have some compression deformity secondary to extrinsic pressure from a soft tissue mass in the right mid-abdomen . . ."

Survey films of abdomen:

". . . a moderate amount of gas scattered throughout the large and small bowel. There is a large irregularly calcified opacity in the pelvis consistent with calcified fibroids . . . The kidney shadows are poorly visualized. The psoas shadows are somewhat obscured by gas in the bowel."

A report of retrograde pyelograms does not appear on the chart. The house staff progress note quotes the radiologist as seeing "no renal mass."

X-ray Discussion — Dr. Vincent M. Ravel:

Of course as all of you can see, there are in the chest these large, circular nodules that are scattered throughout both lung fields. I do not see any evidence of osseous involvement. The patient is somewhat emaciated, there being very little soft tissue.

The abdomen again reveals a suggestion of soft tissue mass in the right flank, together with this characteristic irregular, granular calcification that is usually seen in calcified fibroids of the uterus.

Intravenous Urogram

The next examination was an intravenous urogram; the left kidney appears normal, concentrates well, and there are no significant defects. However, the right kidney shows a deformity of the inferior calyx, although the kidney concentrates well and receives excellent concentration of the opaque media in the pelvis.

The soft tissue mass seems to extend somewhat laterally, and, interestingly, the visualized superior calyx does not show any evidence of obstruction. In the retrograde pyelogram it seems as if the ureter is displaced somewhat medially. In the lateral view there is an anterior displacement of the ureter. In the normal kidney the ureter would lie along the posterior gutter of the abdomen and here it seems to be displaced anteriorly.

I have been looking very carefully at the transverse processes of the vertebrae trying to identify some erosion or some osseous or osteoblastic process. I can't

identify anything that involves the vertebral column or the iliac crest so I think that the changes we have here are consistent with a carcinoma of the kidney with a metastasis to the lung or a retroperitoneal sarcoma which would be displacing the ureter anteriorly and involving the inferior pole of the kidney.

I don't believe that the calcified fibroids are of much significance, although occasionally you can get a sarcomatous degeneration, again with extension and metastasis.

Differential Diagnosis — Dr. H. M. Gibson:

We have a case that appears to be very obvious — you have a woman 60 some odd years of age with a mass in her abdomen and X-ray findings which are very characteristic of a tumor of the kidney. The one thing that we would like to have here which would make it almost a hundred per cent complete would be hematuria, inasmuch as 90 some odd per cent of parenchymal tumors have hematuria. We don't know whether she had this or not, although from looking at the retrograde pyelogram, I am reasonably certain she must have had hematuria.

The physical examination is very well described and is characteristic of a retroperitoneal mass or a kidney mass. The X-rays reveal a round shadow which appears to be retroperitoneal involving or arising from the lower pole of the right kidney.

Logical Basis

On a logical basis you can come to no other conclusion than the fact that this woman had a carcinoma of the kidney or I should say a malignant process involving the lower pole of the right kidney (this would allow a little more leeway). On a percentage basis, it most likely would be a clear cell type carcinoma of the kidney. Next, it would most likely be a so-called granular cell carcinoma of the kidney. From that point on you get into various aberrations.

You could have a sarcoma of the kidney; it could be a process arising from the retroperitoneal space and secondarily invading the kidney. It is possible that this would be a cyst of the kidney that has undergone malignant degeneration in the form of forming a papillary type of cystadenoma, but my diagnosis on the basis of what we have here is a carcinoma of the kidney involving the lower pole. Now, come slaughter me!

Dr. F. P. Bornstein:

Thank you, Dr. Gibson. I would like to ask you a question, a question which has always interested me. On the assumption that this women had a carcinoma of the kidney, what happened to her?

Dr. H. M. Gibson:

You mean the terminal process?

Dr. F. P. Bornstein:

Yes.

Dr. H. M. Gibson:

The most common way that they kill is by metastatic lesions involving some vital part of the body. It is possible for a lesion of this type to have a hemorrhage into the substance of the tumor or to invade and destroy directly some vital organ such as the vena cava or something of that nature.

Dr. F. P. Bornstein:

Any further discussion? The thing that strikes me about the history is that she had abdominal pain, generalized, specially on the right, and rather high white count; now, how does this go with carcinoma of the kidney, the distended abdomen and so on? Do any of the other surgeons here care to make a suggestion about what is going on in the abdomen before we discuss the autopsy findings?

Dr. Celso Stapp:

In relation to why people die in cases of carcinoma, we see people die with carcinoma who are quite dehydrated, they have been unable to maintain a fluid balance. I had one die this month in whom the hemoglobin never dropped below 14 grams, but I felt that she was getting a terrific amount of blood destruction.

She did have intestinal obstruction along with it. I don't think that you have to have anything more than metastases with the blood destruction that goes along with it. I am sure she was destroying blood pretty fast even without hemorrhage. The white count being up may be due to the hemoconcentration that they undergo with it.

Dr. W. R. Gaddis:

In the few patients that I have seen with adenocarcinoma of the kidney of the clear cell type, anemia was an outstanding finding in nearly every one of them. In one patient which came to me it was the presenting symptom of which the patient complained, and, therefore, I think that it might be misleading at times if we are to assume too much on the basis of this.

I would like to point out that this patient was a very good candidate from the beginning for sudden death episode of any nature because she came in to the hospital stuporous and possibly or probably had metastases within the cranial cavity at the time of admission to the hospital and having metastases there it is not inconceivable that sudden death could obtain from the sudden onset of encroachment upon the vital centers.

In addition, as Dr. Gibson pointed out, if this tumor in the abdomen were to suddenly become necrotic and hemorrhagic, it certainly would not be so inconceivable that she would die of immediate hemorrhage and could expire in the manner that was described in the protocol. However, I think that her death was due to central factors rather than to a matter of

hemorrhagic loss of blood within the cavity or immediate adjacent area to the tumor.

Clinical Diagnosis: — Kidney tumor

Dr. H. M. Gibson's Diagnosis: — Carcinoma of kidney

Pathological Diagnosis: Acute peritonitis due to ruptured sub-hepatic abscess due to erosion of ascending colon by carcinoma of right kidney.

Pathological Discussion: - Dr. F. P. Bornstein:

On autopsy we found an emaciated elderly woman The main findings were in the abdominal cavity. The abdominal cavity contained about 100 cc. of pus. The peritoneum and the intestinal loops showed all the gross findings of an acute peritonitis. On investigating the source of this peritonitis it was very easy to rule out such obvious sources as the appendix or a ruptured peptic ulcer.

We found a large ruptured abscess below the inferior surface of the right lobe of the liver extending downward to the ascending colon. It then could be seen that the posterior wall of the colon had been eroded by a retroperitoneal tumor mass. After further dissection a large tumor was found in the right lower pole of the kidney which on histopathological examination proved to be a clear cell carcinoma.

From the preceding discussion it is quite obvious that carcinoma of the kidney was the first diagnosis considered by everybody concerned. However, the mechanism by which this tumor killed the patient was completely unsuspected during her course in the hospital.

Erosion of anterior structures with secondary peritonitis is evidently one of the rarer complications of carcinoma of the kidney. In retrospect, however, a distended abdomen, rapid pulse, and shock-like death, are compatible with an acute peritonitis.

ANEMIA

The Blood Volume In Various Medical And Surgical Conditions

Berlin, N. I., et al., New England J. M. 247:675, 1952

Hematologic observations by the labeled red-cell technic on 179 normal pregnant women indicate that there is a real anemia present during gestation. There was a significant decrease in total red-cell volume during the first trimester of pregnancy followed by a slow rise until the ninth month. A 300 cc. decrease occurred at delivery, the total red-cell volume remaining below normal* as long as six weeks post partum.

**The total red-cell volume for normal, nonpregnant women is 27.0 cc./Kg. (Hematocrit 42.0%)*
Clinical Clippings, January, 1953.

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